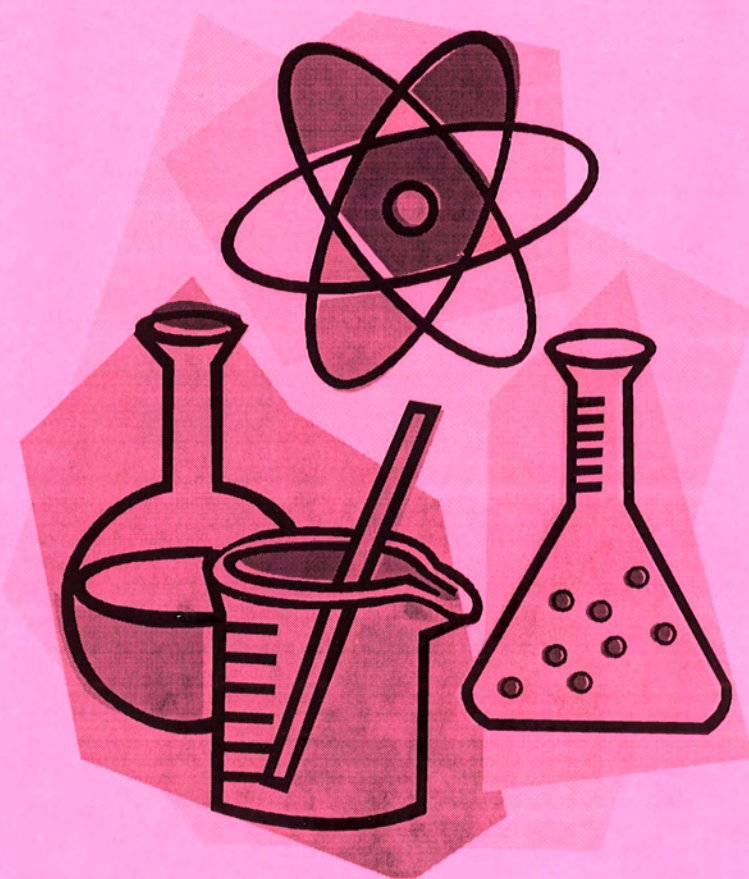


SDS/MSDS*

Rio Salado College

Science Lab



A	B	C
Alum (Aluminum potassium sulfate)	Baking soda (Sodium bicarbonate)	Calcium Chloride, Anhydrous
Aluminum (foil, shot, strips)	Beano tablets	Carosafe (Carolina Specimen Preservative)
Ammonium carbonate (Smelling salts)	Benedict's Qualitative Solution	Carbon (rod)
Antacid tablets	Biuret Test Solution	Charcoal (Activated)
	Blue-green algae tablets* (<i>Aphanizomenon Flos-Aquae</i>)	Chicken Bouillon*
	Buffer solution, pH 4.00	Copper (shot, strips)
	Buffer solution, pH 7.00	Copper sulfate (powder)
		Corn Starch
		Corn Syrup (Light)
		Correction fluid (Wite-Out)

D	E	F
DampRid	Egg whites, dried*	Fire extinguisher
Diastix Reagent Strips	Embalming fluid (Specimen Preservative)	
Dishwashing detergent (Ultra Dawn)	Epsom salts (Magnesium sulfate)	
	<i>Expo</i> White Board Cleaner	
	Enameled copper wire (Magnet wire)*	

G	H	I
Gelatin (powdered, unflavored)		Iron Filings
Glue, Elmer's All Max		Iron Granules
Goo Gone Spray Gel		Iron metal (strips)
Graphite Rod		
Green Solutions- Waxie (General)		

J	K	L
		Lactaid Tablets
		Lead (shot, strips, sinkers)

M	N	O
Magnesium Chloride	Nickel (strips)	
Magnesium (Ribbon)		
Milk, Non-fat Dry		

P	Q	R
Phenol red (tablets)		

pH Indicator Paper Universal Indicator)		
Potassium Chloride		
Potassium Iodide		
Potato Starch		
Potting soil*		
PTC Taste Test strips		

S	T	U
Washing Soda (Sodium carbonate, Anhydrous)	Talcum Powder	
Sodium chloride (Rock salt, Sea salt, table salt)	Tin (strips)	
Spirulina powder	Thermometer (Spirit Filled)	
Sucralose (Splenda)		
Sugar, Table (Sucrose)		
Steel wool		
Super Glue Gel		

V	W	X

Y	Z	Archived SDS/MSDS
Yeast, Instant Dry Active	Zinc metal (strips)	Almond meal*
		Antacid, Effervescent (Alka-Seltzer)*
		Baking Soda (Sodium Bicarbonate)*
		Calcium Chloride (Anhydrous)*
		Carosafe (Carolina Biological Specimen Preservative)*
		Cleaner (Green Solutions)
		Cleaners/Disinfectants (Waxie)*
		Correction Fluid *
		Epsom Salt (Magnesium Sulfate Heptahydrate)
		Ethyl Alcohol Solution, 70%
		Expo White Board Cleaner*
		Fire Extinguisher*
		Flax Seed Meal*
		Flour (Wheat)* and SDS
		Gelatin (Powdered, Unflavored)*
		Glue (Elmer's White)*
		Glycerin *
		Goo Gone (Painter's Pal)*
		Goo Gone (Spray Gel)*

A

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 42.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum Potassium Sulfate (Alum)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Aluminum potassium sulfate	7784-24-9	$\text{AlK}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$	474.39	
Synonym: Alum				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Wipe up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Odorless.

Melting point: 92.5 °C

Soluble: Water. Insoluble in alcohol.

Specific gravity: 1.7

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, bases, steel, aluminum, copper, and zinc. When heated to decomposition (200 °C), emits toxic sulfur trioxide fumes.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, gastrointestinal disturbances.

ORL-RAT LD₅₀: N.A.

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-141-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 34.50

Revision Date: June 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Aluminum (foil, shot, strips)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Aluminum	7429-90-5	Al	26.98	

Synonyms: Aluminum foil, strips, wire, sheet

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Aluminum, as dust, is a flammable solid. Powder Autoignition Temperature: 760 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use class D fire extinguisher or dry sand for extinction (P370+P378).

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid powder or dust to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Silvery solid. Odorless.
Insoluble in water.

Boiling point: 2467 °C
Melting point: 660 °C
Specific gravity: 2.70

SECTION 10 — STABILITY AND REACTIVITY

Contact with acids liberates flammable hydrogen gas.
Avoid contact with acids, acid chlorides, oxidizers, and halogens.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-072-3), RCRA code D001 (dust only).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: June 16, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 51.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ammonium Carbonate (Smelling salts)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2B). Causes skin and eye irritation (H315+H320).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ammonium carbonate	506-87-6	(NH ₄) ₂ CO ₃	96.09	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin:** Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313). **If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.

Decomposes to NH₃ and CO₂ at temperatures above 58 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Store in a cool, dry place. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline plates or lump. Strong ammonia odor.
Soluble: Water. Decomposes in hot water.

Melting point: 58 °C (decomposes)
Specific gravity: 1.5

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids. Decomposes in hot water.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: 2150 mg/kg
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (208-058-0).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 75.60

Revision Date: July 13, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Antacid Tablets

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Calcium carbonate, CaCO₃ (471-34-1), 500-550 mg per tablet. May also contain magnesium hydroxide, Mg(OH)₂ (1309-42-8), 110 mg per tablet. Synonym: Rolaid[®]

CAS#: None established

SECTION 3 — HAZARDS IDENTIFICATION

White tablet. Slight mint odor. Dust may cause irritation; if tablets are crushed, avoid breathing dust.
Not for human consumption.

FLINN AT-A-GLANCE

Health-0

Flammability-0

Reactivity-0

Exposure-0

Storage-0

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Rinse mouth. Give large quantities of water for dilution.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

Fire Fighting Instructions: Use a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn suggested chemical storage pattern: Inorganic #4. Store with hydroxides, oxides, silicates, and carbonates.

Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White tablet with a slight mint odor.
Solubility: Slight solubility in water; soluble in acids with evolution of carbon dioxide.

Mixture of calcium carbonate or calcium carbonate and magnesium hydroxide with fillers and binders.
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid excessive heat (over 104 °F).
Shelf life: Good, if stored in cool, dry place.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.
Avoid ingestion of any item stored in a chemical storeroom.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated
Hazard class: N/A
UN number: N/A
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

**Consult your copy of the *Flinn Science Catalog/Reference Manual*
for additional information about laboratory chemicals.**

B

BAKING SODA



Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 03/12/2015 Date of Issue: 03/12/2015 Supersedes Date: 03/09/2012

Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Substance

Product Name: Sodium Bicarbonate

CAS No: 144-55-8

Formula: NaHCO₃

Synonyms: Baking Soda

Intended Use of the Product

Food Ingredient, Pharmaceutical, Household and Personal Care Product, Water Treatment, General Industrial Use.

Name, Address, and Telephone of the Responsible Party

Company

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328
www.churchdwight.com

Emergency Telephone Number

Emergency Number : For Medical Emergency: 1-888-234-1828, For Chemical Emergency: 1-800-424-9300 (CHEMTREC)

SECTION 2: HAZARDS IDENTIFICATION

The consumer variant of this product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC) and the Food and Drug Administration (FDA). The use pattern and exposure in the workplace are generally not consistent with those experienced by consumers. The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and FDA, and as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

Classification of the Substance or Mixture

Classification (GHS-US) Not classified

Label Elements

GHS-US Labeling No labeling applicable

Other Hazards Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. Prolonged contact with dust can produce mechanical irritation.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name : Sodium Bicarbonate
CAS No : 144-55-8

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Sodium bicarbonate	(CAS No) 144-55-8	100	Not classified

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.

Most Important Symptoms and Effects Both Acute and Delayed

General: None expected under normal conditions of use.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Eye Contact: Contact may cause irritation due to mechanical abrasion.

Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: For surrounding fire: Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: NOT FLAMMABLE . Under fire conditions, hazardous fumes will be present.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Sodium oxides.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills.

Keep in suitable, closed containers for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: When heated, material emits irritating fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Materials: Acids. Water. Lime.

Storage Temperature: < 65 °C (150 °F)

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Specific End Use(s) Food Ingredient, Pharmaceutical, Water Treatment, General Industrial Use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Particulates not otherwise classified (PNOC)		
USA ACGIH	ACGIH TWA (mg/m ³)	3 mg/m ³ Respirable fraction 10 mg/m ³ Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m ³)	5 mg/m ³ Respirable fraction 15 mg/m ³ Total Dust
Alberta	OEL TWA (mg/m ³)	10 mg/m ³ (total)
British Columbia	OEL TWA (mg/m ³)	10 mg/m ³ (total dust)
Manitoba	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
New Brunswick	OEL TWA (mg/m ³)	3 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass)
Northwest Territories	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass)
Ontario	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable)
Prince Edward Island	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable particles, recommended)
Québec	VEMP (mg/m ³)	10 mg/m ³ (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³ (insoluble or poorly soluble-inhalable fraction) 6 mg/m ³ (insoluble or poorly soluble-respirable fraction)
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³ (insoluble or poorly soluble-inhalable fraction) 3 mg/m ³ (insoluble or poorly soluble-respirable fraction)

Exposure Controls

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: For occupational or bulk quantities: Gloves. Safety glasses. Dust formation: dust mask.



Materials for Protective Clothing: For occupational or bulk quantities: Chemically resistant materials and fabrics.

Hand Protection: For occupational or bulk quantities: Wear chemically resistant protective gloves.

Eye Protection: For occupational or bulk quantities: Chemical goggles or safety glasses.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: White, crystalline powder
Odor	: None
Odor Threshold	: Not available
pH	: 8.2 (1% Solution)
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: Not available

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Upper/Lower Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific gravity / density	: 62 lb/ft ³
Specific Gravity	: Not available
Solubility	: Water; 8.6 g/100ml @ 20 °C (68 °F)
Partition Coefficient: N-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Decomposes slowly on exposure to water (moisture).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Exposure to moisture or moist air. Temperatures above 150°F (65 °C).

Incompatible Materials: Acids. Water. Lime.

Hazardous Decomposition Products: None known. At high temperature may liberate toxic gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data:

Sodium Bicarbonate	
LD50 Oral Rat	7.3 g/kg
LC50 Inhalation Rat	> 4.7 mg/l/4h

Skin Corrosion/Irritation: Not classified [pH: 8.2 (1% Solution)]

Serious Eye Damage/Irritation: Not classified [pH: 8.2 (1% Solution)]

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Symptoms/Injuries After Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.

Symptoms/Injuries After Eye Contact: Contact may cause irritation due to mechanical abrasion.

Symptoms/Injuries After Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity No additional information available

Sodium Bicarbonate	
LC50 Fish 1	7100 mg/l Bluegill
EC50 Daphnia 1	4100 mg/l
LC 50 Fish 2	7700 mg/l Rainbow Trout
Sodium bicarbonate (144-55-8)	
LC50 Fish 1	8250 - 9000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Sodium Bicarbonate

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Persistence and Degradability Not established

Bioaccumulative Potential Not established

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal & International Regulations

Sodium Bicarbonate (144-55-8)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Neither this product nor its chemical components appear on any US state lists.

Canadian Regulations

Sodium bicarbonate (144-55-8)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 03/12/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document

Church & Dwight
500 Charles Ewing Blvd
Ewing Township, NJ 08628
T 1-800-524-1328

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North America GHS US 2012 & WHMIS 2

SAFETY DATA SHEET



GlaxoSmithKline

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Material	BEANO TABLETS
Synonyms	BEANO REGULAR STRENGTH TABLETS * BEANO TABLETS (US AND CANADA) * BEANO ENZYME EN COMPRIMES * FORMULA NUMBER B2113 * ALPHA-GALACTOSIDASE, FORMULATED PRODUCT
Company Name	GlaxoSmithKline, Corporate Environment, Health & Safety 980 Great West Road Brentford, Middlesex TW8 9GS UK
	UK General Information: +44-20-8047-5000
	Transport Emergency (EU) +44-1865-407333
	Medical Emergency +1-612-221-3999, Ext 221
	Information and Advice: US number, available 24 hours Multi-language response
	 GlaxoSmithKline, Corporate Environment, Health & Safety One Franklin Plaza, 200 N 16th Street Philadelphia, PA 19102-1225 US
	US General Information: +1-888-825-5249
	Transport Emergency (non EU) +1-703-527-3887
	US number, available 24 hours Multi-language response

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS RN	Percentage
ALPHA D-GALACTOSIDASE	9025-35-8	4.37
NON-HAZARDOUS INGREDIENTS	Unassigned	95.63

3. HAZARDS IDENTIFICATION

Fire and Explosion	Expected to be non-combustible.
Health	Handling this product in its final form presents minimal risk from occupational exposure. Health effects information is based on hazards of components.
Environment	No information is available about the potential of this product to produce adverse environmental effects.

4. FIRST-AID MEASURES

Ingestion	Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink. Obtain medical attention.
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Material BEANO TABLETS

Inhalation	Physical form suggests that risk of inhalation exposure is negligible.
Skin Contact	Using appropriate personal protective equipment, remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical attention if skin reaction occurs, which may be immediate or delayed.
Eye Contact	Wash immediately with clean and gently flowing water. Continue for at least 15 minutes. Obtain medical attention.

NOTES TO HEALTH PROFESSIONALS

Medical Treatment	None.
Medical Conditions Caused or Aggravated by Exposure	None for occupational exposure.
Antidotes	No specific antidotes are recommended.

5. FIRE-FIGHTING MEASURES

Fire and Explosion Hazards	Not expected for the product, although the packaging is combustible.
Extinguishing Media	Water or foam extinguishers are recommended. Carbon dioxide or dry powder extinguishers may be ineffective.
Special Firefighting Procedures	For single units (packages): No special requirements needed. For larger amounts (multiple packages/pallets) of product: Since toxic, corrosive or flammable vapours might be evolved from fires involving this product and associated packaging, self contained breathing apparatus and full protective equipment are recommended for firefighters. If possible, contain and collect firefighting water for later disposal.
Hazardous Combustion Products	Toxic, corrosive or flammable thermal decomposition products are expected when the product is exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear protective clothing and equipment consistent with the degree of hazard.
Environmental Precautions	For large spills, take precautions to prevent entry into waterways, sewers, or surface drainage systems.
Clean-up Methods	Collect and place it in a suitable, properly labelled container for recovery or disposal.
Decontamination Procedures	No specific decontamination or detoxification procedures have been identified for this product.

7. HANDLING AND STORAGE**HANDLING**

General Requirements Avoid breaking or crushing tablets.

STORAGE

No storage requirements necessary for occupational hazards. Follow product information storage instructions to maintain efficacy.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	ALPHA D-GALACTOSIDASE
GSK Occupational Hazard Category	2

Other Equipment or Procedures	None required for normal handling. Wash hands and arms thoroughly after handling.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Colour	White/off-white.
Physical Form	Tablet.

10. STABILITY AND REACTIVITY

Stability	This product is expected to be stable.
Conditions to Avoid	None for normal handling of this product.

11. TOXICOLOGICAL INFORMATION

Oral Toxicity	Not expected to be toxic following ingestion.
Inhalation Toxicity	Inhalation toxicity is not expected.
Skin Effects	Irritation is not expected following direct contact.
Eye Effects	Irritation is not expected following direct contact with eyes.
Sensitisation	Sensitisation (allergic skin reaction) is not expected.
Genetic Toxicity	Not expected to be genotoxic under occupational exposure conditions.
Carcinogenicity	Not expected to produce cancer in humans under occupational exposure conditions. No components are listed as carcinogens by GSK, IARC, NTP or US OSHA.
Reproductive Effects	Not expected to produce adverse effects on fertility or development under occupational exposure conditions.
Other Adverse Effects	None known for occupational exposure.

12. ECOLOGICAL INFORMATION

Summary	No information is available about the potential of this product to produce adverse environmental effects. Local regulations and procedures should be consulted prior to environmental release.
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13. DISPOSAL CONSIDERATIONS

Disposal Recommendations	Collect for recycling or recovery if possible. The disposal method for rejected products/returned goods must ensure that they cannot be re-sold or re-used.
Regulatory Requirements	Observe all local and national regulations when disposing of this product.

14. TRANSPORT INFORMATION

The SDS should accompany all shipments for reference in the event of spillage or accidental release. Only authorised persons trained and competent in accordance with appropriate national and international regulatory requirements may prepare dangerous goods for transport.

UN Classification and Labelling

Transport Information	Transportation and shipping of this product is not restricted. It has no known, significant hazards requiring special packaging or labelling for air, maritime, US or European ground transport purposes.
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15. REGULATORY INFORMATION

The information included below is an overview of the major regulatory requirements. It should not be considered to be an exhaustive summary. Local regulations should be consulted for additional requirements.

EU Classification and Labelling

Exempt from requirements of EU Dangerous Preparations directive - product regulated as a medicinal product, cosmetic product or medical device.

US OSHA Standard (29 CFR Part 1910.1200)

Classification Exempt when packaged for sale to consumers in a retail establishment.

Other US Regulations

TSCA Status Exempt

16. OTHER INFORMATION

References GSK Hazard Determination

Date Approved/Revised 06-Jun-2007

SDS Version Number 7

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 102.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Benedict's Qualitative Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium citrate dihydrate	6132-04-3	Na ₃ C ₆ H ₅ O ₇ ·2H ₂ O	294.10	16-20%
Sodium carbonate, anhydrous	497-19-8	Na ₂ CO ₃	105.99	8-12%
Copper(II) sulfate, anhydrous	7758-98-7	CuSO ₄	159.61	1-2%
Water	7732-18-5	H ₂ O	18.02	66-75%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If eye irritation persists: Get medical advice or attention (P337+P313).**If skin irritation occurs:** Get medical advice or attention (P332+P313).**If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Light blue liquid. Odorless.

pH: ~11

Used to test for reducing sugars.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and mild skin irritant.

ORL-RAT LD₅₀: 300 mg/kg (for CuSO₄)

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 121.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Biuret Test Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Corrosive to metals (Category 1). May be corrosive to metals (H290).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Copper(II) sulfate pentahydrate	7758-99-8	CuSO ₄ ·5H ₂ O	249.69	0.2%
Sodium hydroxide	1310-73-2	NaOH	39.997	30%
Water	7732-18-5	H ₂ O	18.00	70%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).

If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).

If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.



Material Safety Data Sheet (MSDS)

Product Name: Whole Dry AFA (*Aphanizomenon flos-aquae*) *Blue-green algae.)*
Manufacturer: Power Organics, Inc.
PO Box 1626, 301 South Old Stage Road
Mount Shasta, California 96067
530-926-6684 Fax: 530-926-6685

Section 1 PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Whole Dry AFA (*Aphanizomenon flos-aquae*)
Catalog Numbers:
Synonyms: Blue-green algae
Company Identification:
Power Organics, Inc.
PO Box 1626, 301 South Old Stage Road
Mount Shasta, California 96067
530-926-6684 Fax: 530-926-6685
www.powerorganics.com
info@powerorganics.com

Section 2 COMPOSITION, INFORMATION ON INGREDIENTS

100% Pure Blue-green algae. Natural product. Powder.

Section 3 PHYSICAL DATA

Physical State: Powder
Appearance: Metallic Green Powder
Odor: Sweet, Rich Chlorophyll
pH: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Evaporation Rate: N/A
Viscosity: N/A
Boiling Point: N/A
Freezing/Melting point: N/A
Decomposition Temperature: N/A
Stability: Stable
Solubility: Partially Soluble
Specific Gravity/Density: 0.2-0.5g/cm³
Molecular Formula: N/A
Molecular Weight: N/A
Moisture Sensitive: Hygroscopic



Section 4 PHYSICAL / CHEMICAL PROPERTIES

Physical State: powder
Moisture Content: <7%

Color: Dark Green to Dark Blue Green
Water Solubility: 100%

Section 5 HAZARD IDENTIFICATION

Emergency Overview: Contact with eyes may cause irritation

NFPA Hazard Classifications:

1 Healthy 0 Reactivity
0 Flammability

Section 6 FIRST AID MEASURES

Eye Contact: Flush with water, lifting upper and lower lids.

Section 7 FIRE FIGHTING MEASURES

Flash Point: None

Auto-ignition Temperature: None

Extinguishing Media: NA

Unusual Fire and Explosion Hazards: None

Special Firefighting Procedures: Standard firefighting procedures.

Section 8 ACCIDENTIAL RELEASE MEASURES

Steps to be taken if material is released or spilled: Isolate the material. Shut off positive ventilation, and put negative ventilation into area, if in powder form. Sweep using brooms and dust pans or vacuum.

Section 9 HANDLING, STORAGE AND SHELF LIFE

Handling: No restrictions.

Storage: Product should be stored carefully protected from moisture, light, heat and other contaminants. Keep away from heat sources and open flame, in powder form. Shelf life of product is 3 years from date of manufacture. This will always be listed on the Certificate of Analysis which accompanies the product when shipped.



Section 10 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: None

Respirator Protection: Use of a face mask, optional.

Skin Protection: N/A

Eye Protection: Goggles or safety glasses recommended.

Other Protective Equipment: Algae is a food product. Utilize the manufacturer's GMP for the handling of food product.

Hygienic Practices: Utilize the manufacturer's GMP for the handling of food product.

Section 11 STABILITY AND REACTIVITY

Conditions to avoid: None

Incompatibility: N/A

Hazardous Decomposition Products: N/A

Stability: This product is stable under normal storage conditions.

Section 12 DISPOSAL CONSIDERATIONS

U.S. Discarded product is not a hazardous waste pursuant to RCRA 40 CFR 261. It is biodegradable.

Section 13 TRANSPORT INFORMATION

No USA DOT classification for this product.

Section 14 REGULATORY INFORMATION

This material is intended to be used as a food and as an ingredient in cosmetics, and is exempt from the Toxic Substances Control Act regulation.

Section 15 OTHER INFORMATION

This product does not contain any chemical subject to the reporting requirements of 40 CFR 355, 370 and 372.

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 154.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Buffer Solution, Concentrated, pH 4.00

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and dermal (Category 5). May be harmful if swallowed or in contact with skin (H303+H313).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium hydrogen phthalate	877-24-7	$\text{KHC}_8\text{H}_4\text{O}_4$	204.23	<5%
Water	7732-18-5	H_2O	18.00	>95%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic Miscellaneous. Store with other buffers.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

Contains buffer and distilled water (potassium hydrogen phthalate).

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat.

Shelf life: Fair.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Mild irritant.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD₅₀: >3200 mg/kg as KHP

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 155.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Buffer Solution, Concentrated, pH 7.00

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium phosphate monobasic	13761-79-0	KH ₂ PO ₄	136.09	<20%
Sodium hydroxide	1330-43-4	NaOH	39.997	3%
Methylparaben solution	99-76-3	C ₈ H ₈ O ₃	152.16	0.2%
Water	7732-18-5	H ₂ O	18.00	>81%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic Miscellaneous. Store with other buffers.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as sodium hydroxide) PEL 2 mg/m³ (OSHA), Ceiling 2 mg/m³ (ACGIH), IDLH 10 mg/m³

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear liquid. Odorless.

pH: 7 when diluted properly.

Dilute prior to use. Dilute 4 mL of concentrate to 100 mL with deionized water.

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat.

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin burns. Mucous membrane irritant.
pneumonitis.

ORL-RAT LD₅₀: 500 mg/kg (as sodium hydroxide)

IHL-RAT LC₅₀: N.A.

Chronic effects: N.A.

SKN-RBT LD₅₀: 50 mg/24H (as sodium hydroxide)

Target organs: Eyes, skin, respiratory system

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Blue liquid. Slight acrid odor.

pH: basic

Used to test for proteins.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive.

ORL-RAT LD₅₀: 500 mg/kg (as sodium hydroxide)

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: 50 mg/24H (as sodium hydroxide)

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

C

Section 1 Chemical Product and Company Information



**Aldon
Corporation**

221 Rochester Street
Avon, NY 14414
(585) 226-6177

**CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300**
For laboratory use only.
Not for drug, food or household use.

Product | **CALCIUM CHLORIDE, ANHYDROUS**

Synonyms | N/A

Section 2 Hazards Identification

Signal word: WARNING

Pictograms: GHS07

Target organs: None known



GHS Classification:

Eye irritation (Category 2A)

GHS Label information: Hazard statement:

H319: Causes serious eye irritation.

Precautionary statement:

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313: If eye irritation persists: Get medical attention.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Calcium chloride	10043-52-4	>91.0%	233-140-8
Water	7732-18-5	4.5%	231-791-2
Potassium chloride	7447-40-7	2.5%	231-211-8
Sodium chloride	7647-14-5	1.5%	231-598-3
Strontium chloride	10476-85-4	0-1%	233-971-6

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Heat is generated when product mixes with water.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Hygroscopic material. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulates not otherwise classified		None established	TWA: 15 mg/m ³ total dust

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid. White pellets.

Odor: No odor.

Odor threshold: Data not available.

pH: Data not available.

Melting / Freezing point: 772°C (1422°F)

Boiling point: Data not available

Flash point: Not applicable

Evaporation rate (= 1): Not applicable

Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: Not applicable

Vapor pressure (mm Hg): Negligible

Vapor density (Air = 1): Data not available

Relative density (Specific gravity): Data not available

Solubility(ies): Soluble in water.

Partition coefficient: Not applicable

Auto-ignition temperature: Not applicable

Decomposition temperature: Data not available.

Viscosity: Data not available.

Molecular formula: CaCl₂

Molecular weight: 110.99

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Hygroscopic material. Avoid moisture.

Incompatible materials: Heat is generated when mixed with water. Spattering and boiling can occur. Avoid contact with sulfuric acid. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as zinc and sodium.

Hazardous decomposition products: None known.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 2100 mg/kg ; Dermal-rabbit LD50: >5000 mg/kg

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: Dust may cause irritation to the upper respiratory tract (nose and throat).

Ingestion: Low toxicity if swallowed. However, large amounts may result in gastrointestinal irritation or ulceration.

Skin: Contact with skin may cause irritation and/or defatting on prolonged contact.

Eyes: Contact with eyes may cause severe irritation and/or corneal injury.

Signs and symptoms of exposure: See Potential health effects above.

Additional information: RTECS #: EV9810000

Section 12 Ecological Information

Toxicity to fish: Lepomis macrochirus (bluegill) LC50: 8,350-10,650 mg/L

Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (water flea), LC50: 759-3,005 mg/L

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: No

Marine pollutant: No

Exceptions: Not applicable

2012 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Calcium chloride	Listed	Not listed	Not listed	Listed	Not listed	D2B

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 25, 2014

Supersedes: October 11, 2013

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 211.50

Revision Date: March 24, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Carbon (rod)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Carbon	7440-44-0	C	12.01	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.

Autoignition Temperature: 450 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.
Exposure Guidelines: (as carbon black) PEL 3.5 mg/m³ (OSHA); 3 mg/m³ (inhalable fraction) ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Black rod. Odorless.
Soluble: Insoluble in water.

Boiling point: 4200 °C
Specific gravity: 1.821-2.1

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat, flame, and oxidizing agents.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-153-3).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 24, 2014

Safety Data Sheet

Specimens in Carosafe®

CAROLINA
www.carolina.com

Specimen Preservation

Section 1 Product Description

Product Name: Specimens in Carosafe®
Recommended Use: Science education applications
Synonyms: None Known
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



May cause cancer.

GHS Classification:
arcinogenicity Category 1A, Skin Corrosion/Irritation Category 3, Acute Toxicity - Oral Category 5

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	90
Propylene Glycol	57-55-6	9.1
2-Phenoxyethanol	122-99-6	0.06
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	0.03

Specimens will contain some residual formaldehyde. Cow and Sheep specimens will contain some residual phenol.

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Safety Data Sheet

Steps to Take in Case Material Is Released or Spilled:

No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Surfaces may become slippery after spillage. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

Section 7 Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Avoid contact with skin and eyes. Do not breathe gas/fumes/vapor/spray.

Storage: Store locked up. Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Propylene Glycol	N/A	N/A	N/A	N/A
2-Phenoxyethanol	N/A	N/A	N/A	N/A
2-Amino-2-Ethyl-1,3-Propanediol	N/A	N/A	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur as explained Section 11. A respirator is not normally required.

Respirator Type(s): None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: See Section 3

Molecular Weight: No data available

Appearance: Colorless Preserved Specimen

Odor: Mild distinct sweet, pungent biological odor.

Odor Threshold: No data available

pH: 7

Melting Point: No data available

Boiling Point: 100 C

Flash Point: > 200 C

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: >1

Solubility in Water: Soluble

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10 Reactivity Data

Reactivity: No data available

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Metals, Strong oxidizing agents, Strong alkalies, Caustics (bases)

Hazardous Decomposition Products: Carbon oxides, Nitrogen containing gases

Hazardous Polymerization: Will not occur

Safety Data Sheet

Section 11

Toxicity Data

Routes of Entry: Inhalation and ingestion.
Symptoms (Acute): Diarrhea, Nausea, Respiratory Irritation, Dermatitis, Allergies
Delayed Effects: No data available

Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90000 mg/kg		
Propylene Glycol	57-55-6	Oral LD50 Dog 22000 mg/kg	Dermal LD50 Rabbit 20800 mg/kg	
2-Phenoxyethanol	122-99-6	Oral LD50 Rat 1260 mg/kg Oral LD50 Mouse 933 mg/kg	Dermal LD50 Rat 14422 mg/kg Dermal LD50 Rabbit 5 ml/kg	
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8			

Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Propylene Glycol	57-55-6	Not listed	Not listed	Not listed
2-Phenoxyethanol	122-99-6	Not listed	Not listed	Not listed
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	Not listed	Not listed	Not listed

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: No information available
Chronic: No information available

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: This material is expected to have high mobility in soil. It absorbs weakly to most soil types.
Persistence: Biodegradation, Dissolved into water
Bioaccumulation: Bioconcentration is not expected to occur.
Degradability: Biodegrades at a moderate rate.
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Propylene Glycol	57-55-6	96 HR LC50 PIMEPHALES PROMELAS 710 MG/L 96 HR LC50 PIMEPHALES PROMELAS 51400 MG/L [STATIC] 96 HR LC50 ONCORHYNCHUS MYKISS 51600 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA > 1000 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA > 10000 MG/L 96 HR EC50 PSEUDOKIRCHNERIELLA SUBCAPITATA 19000 MG/L
2-Phenoxyethanol	122-99-6	96 HR LC50 PIMEPHALES PROMELAS 366 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA > 500 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 500 MG/L
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	Not available

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Safety Data Sheet

Ground - DOT Proper Shipping Name:
Not regulated for transport by US DOT.

Air - IATA Proper Shipping Name:
Not regulated for air transport by IATA.

Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Propylene Glycol	57-55-6	No	No	No	No	No
2-Phenoxyethanol	122-99-6	No	No	No	No	No
2-Amino-2-Ethyl-1,3-Propanediol	115-70-8	No	No	No	No	No

California Prop 65:

WARNING: This product contains a chemical known to the state of California to cause cancer.

Section 16

Additional Information

Revised: 09/09/2015

Replaces: 08/13/2015

Printed: 10-29-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 228.00

Revision Date: March 24, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Charcoal (Activated)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Charcoal	7440-40-0	C	12.01	

Synonym: Activated carbon

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable solid as a dust.

Autoignition Temperature: 450 °C

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Store in Flinn Chem-Saf™ bag, in a Flinn Saf-Stor™ can. Store in a cool, dry place. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Use only in a hood or well-ventilated area (P271).

Exposure Guidelines: (as carbon black) PEL 3.5 mg/m³ (OSHA); TLV (inhalable fraction) 3 mg/m³ (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Black powder, granule, or lump. Odorless.
Soluble: Insoluble in water.

Boiling point: 4200 °C
Specific gravity: 1.821-2.1

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat, flame, and oxidizing agents.
Shelf life: Good, if kept dry and stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and respiratory tract irritant.
Chronic effects: N.A.
Target organs: Eyes and respiratory tract.

ORL-RAT LD₅₀: 10,000 mg/kg
IHL-RAT LC₅₀: 64.4 mg/L
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Charcoal. Hazard class: 4.2, Spontaneously combustible. UN number: NA1361.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-153-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 24, 2014



INTERNATIONAL DEHYDRATED FOODS, INC.

"ESSENTIALLY SIMILAR" TO FORM OSHA-20
MATERIAL SAFETY DATA SHEET

SECTION I			
PRODUCT NAME:	Powdered Chicken Fat and Chicken Broth <i>C. Chicken Bouillon</i>		
PRODUCT CODES:	4703		
MANUFACTURER:	International Dehydrated Foods, Incorporated		
ADDRESS:	700 S. Chapel Drive Monett, MO 65708 USA		
FOR INFORMATION ON HEALTH HAZARDS CALL:	800/641-6509 or 800/525-7435 - 8:00 a.m. to 5:00 p.m. CST. Ask for Technical Services.		
FOR OTHER INFORMATION CALL:	See Above	INFORMATION EFFECTIVE AS OF: 10/05/04	
SECTION II - HAZARDOUS INGREDIENTS OF MIXTURES			
PRINCIPAL HAZARDOUS COMPONENT(S)	%	TLV (Units)	
None known to IDF	N/A	N/A	
SECTION III - PHYSICAL DATA			
BOILING POINT (F°)	Not applicable	SPECIFIC GRAVITY (H2O=1)	Not applicable
VAPOR PRESSURE (mmHg.)	Not applicable	PERCENT VOLATILE BY VOLUME (%)	Not applicable
VAPOR DENSITY (AIR=1)	Not applicable	EVAPORATION RATE (=1)	Not applicable
SOLUBILITY IN WATER:	Soluble.		
APPEARANCE AND ODOR:	A fine powder with flavor and odor typical of cooked chicken.		
SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	N/A	FLAMMABLE LIMITS	Lel Uel N/A N/A
EXTINGUISHING MEDIA:	Water spray, dry chemical, CO 2.		
SPECIAL FIRE FIGHTING PROCEDURES:	Recommend use of local standard firefighting procedures for proteinaceous material packaged in corrugated containers with polyethylene inner package.		
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known to IDF.		



Recipient of the
U.S. President's "E" Award
for Export Excellence

<http://www.idf.com>

INGREDIENT DEVELOPMENT & FORMULATION

3801 East Sunshine
Springfield, MO 65809 USA

P.O. Box 10347
Springfield, MO 65808 USA

417-881-7820
Fax: 417-881-7274

800-641-6509
E-mail: customerservice@idf.com

SECTION V - HEALTH HAZARD DATA			
THRESHOLD LIMIT VALUE: Not established.			
EFFECTS OF OVEREXPOSURE: In the event this product is blended with other ingredients at customer's Production Facility, it is recommended that normal blending safety practices for high fat, proteinaceous material be maintained.			
EMERGENCY AND FIRST AID PROCEDURES:			
EYE CONTACT:		Use standard procedures for any dry ingredient including eye flush with fresh water.	
SKIN CONTACT:		Maintain sanitary and hygienic conditions.	
SECTION VI - REACTIVITY DATA			
STABILITY:	UNSTABLE		CONDITIONS TO AVOID:
	STABLE	X	Prolonged storage at elevated temperatures denatures protein.
INCOMPATIBILITY: Compatible as a proteinaceous material. (Materials to Avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS: As with any organic material, storage temperature and sanitary handling is vital to avoidance of protein decomposition.			
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID:	
MAY OCCUR	N/A	Elevated temperatures.	
WILL NOT OCCUR	N/A		
SECTION VII - SPILL OR LEAK PROCEDURES			
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Sweep up spilled material and denature prior to disposing.			
WASTE DISPOSAL METHOD: Observe all Federal, State, and Local laws regarding waste disposal, health, and environment for any denatured food product.			
SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify Type): See Section V - Health Hazard Data.			
VENTILATION	LOCAL EXHAUST	Optional	SPECIAL None known to IDF
	MECHANICAL (general)	Optional	OTHER None known to IDF
PROTECTIVE GLOVES: To maintain product wholesomeness, sanitary gloves are recommended.			
EYE PROTECTION: Safety glasses are recommended in any type of industrial operation including food processing.			
OTHER PROTECTIVE EQUIPMENT: Eye bath and washing facilities are recommended in any industrial operation including food processing.			
SECTION IX - SPECIAL PRECAUTIONS			
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Proper lifting practices normally used in packaged material are recommended in an industrial operation. Keep product cool and dry. Practice caution in multiple pallet stacking.			
OTHER PRECAUTIONS: Product is derived from fresh wholesome poultry and/or animal protein and fat processed under Federal USDA observation guidelines, practices, and policies. Use the same care in handling this product as is used in handling any edible food product that is to be used for the production of human food.			



FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 265.00

Revision Date: January 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Copper (strip, shot)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Copper	7440-50-8	Cu	63.55	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

Noncombustible solid in bulk form, but air-borne dust may ignite.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Red-brown ductile metal. Also granules, shot, powder, sheet, wire, and foil turnings. Odorless.	Melting point: 1083 °C
Soluble: Nitric acid and hot sulfuric acid	Specific gravity: 8.92
	TLV: 1 mg/cubic meter as dust or fume

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong acids, bromates, chlorates, iodates, and halogens. Avoid contact with nitric acid, emits toxic fumes of nitrogen oxides.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.	ORL-RAT LD ₅₀ : N.A.
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: N.A.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-159-6), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 21, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 285.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Copper(II) Sulfate, Pentahydrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).

Hazard class: Acute Toxicity, dermal (Category 5). May be harmful in contact with skin (H313).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Copper(II) sulfate, pentahydrate	7758-99-8	CuSO ₄ ·5H ₂ O	249.69	

Synonyms: Cupric sulfate; Blue vitriol; Chalcantite

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313)

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin: Rinse cautiously with water for several minutes (P351).

If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician (P301+P330+P310).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.

However, sulfur trioxide can be produced at temperatures above 653 °C.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Efflorescent. Protect from air. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Blue, crystalline powder, granules or larger crystals. Odorless. Specific gravity: 2.28
Soluble: Water and methyl alcohol. Slightly in alcohol.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with finely powdered metals and heat. Will corrode steel.
Shelf life: Fair, slowly effloresces in air. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, severe eye irritant, and gastrointestinal disturbances.	ORL-RAT LD ₅₀ : 300 mg/kg
Chronic effects: Possible mutagen.	IHL-RAT LC ₅₀ : N.A.
Target organs: Liver, kidneys, and blood.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-847-6).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

Page 1 of 6

Corn Starch

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Corn Starch

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25580

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

May form combustible dust concentrations in air.

Signal word :Warning

Hazard statements:

Precautionary statements:

Other Non-GHS Classification:

**WHMIS
NFPA/HMIS**

NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:

CAS 9005-25-8

Starch, Potato, Reagent Grade

>90 %

Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Consult a physician.

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Corn Starch

After eye contact: Flush eyes with water as a precaution.

After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Shortness of breath. Nausea.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Carbon oxides may be released.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid generating dust.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Environmental precautions:

Prevent from reaching drains, sewer, or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. Sweep up and shovel. Keep in suitable closed containers for disposal. Follow proper disposal methods. Refer to Section 13.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions refer to Section 2.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Store away from incompatible materials. Refer to Sections 5 and 10.

SECTION 8 : Exposure controls/personal protection



Safety Data Sheet

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Effective date ; 11.05.2014

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Corn Starch

Control Parameters:	<p>9005-25-8, High-polymeric carbohydrate material, 10 mg/m³ USA. ACGIH Threshold Limit Values (TLV)</p> <p>9005-25-8, High-polymeric carbohydrate material, 15 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</p> <p>9005-25-8, High-polymeric carbohydrate material, 5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</p> <p>9005-25-8, High-polymeric carbohydrate material, 5 mg/m³ USA. NIOSH Recommended Exposure Limits</p> <p>9005-25-8, High-polymeric carbohydrate material, 10 mg/m³ USA. NIOSH Recommended Exposure Limits</p>
Appropriate Engineering controls:	<p>Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.</p>
Respiratory protection:	<p>Normal ventilation is adequate. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.</p>
Protection of skin:	<p>Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.</p>
Eye protection:	<p>Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles.</p>
General hygienic measures:	<p>Perform routine housekeeping to prevent dust generation. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash hands before breaks and immediately after handling the product.</p>

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	White solid	Explosion limit lower:	Not Available
		Explosion limit upper:	Not Available
Odor:	Not Available	Vapor pressure:	Not Available
Odor threshold:	Not Available	Vapor density:	Not Available
pH-value:	Not Availablen	Relative density:	Not Available
Melting/Freezing point:	Not Available	Solubilities:	
Boiling point/Boiling range:	Not Available	Partition coefficient (n-octanol/water):	Not Available
Flash point (closed cup):	Not Available	Auto/Self-ignition temperature:	Not Available
Evaporation rate:	Not Available	Decomposition temperature:	Not Available

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

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Corn Starch

Flammability (solid,gaseous):	May form combustible dust concentrations in air.	Viscosity:	a. Kinematic:Not Available b. Dynamic: Not Available
Density: Not Available			

SECTION 10 : Stability and reactivity

Reactivity:None under normal processing.

Chemical stability:Stable under normal conditions.

Possible hazardous reactions:

Conditions to avoid:Dust generation, Incompatible materials.

Incompatible materials:Strong oxidizing agents.

Hazardous decomposition products:

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	9005-25-8	LD50 Intraperitoneal - Mouse - 6,600 mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation:		
Dermal:	9005-25-8	Skin - Human Result: Mild skin irritation - 3 h
Sensitization:	No additional information.	
Single Target Organ (STOT):	No additional information.	
Numerical Measures:	No additional information.	
Carcinogenicity:	No additional information.	
Mutagenicity:	No additional information.	
Reproductive Toxicity:	No additional information.	

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:

Bioaccumulative potential:

Mobility in soil:

Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

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Corn Starch

SECTION 14 : Transport information

UN-Number

Not Regulated

UN proper shipping name

Not Regulated

Transport hazard class(es)

Packing group:Not Regulated

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

9005-25-8 Not Regulated.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

9005-25-8 Not Regulated.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.05.2014

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Corn Starch

GHS Full Text Phrases:

Abbreviations and acronyms:

Effective date : 11.05.2014

Last updated : 05.08.2015

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.27.2014

Page 1 of 6

Corn Syrup

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Corn Syrup

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25339

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Not classified for physical or health hazards under GHS.

Hazard statements:

Precautionary statements:

Combustible Dust Hazard :

May form combustible dust concentrations in air (during processing).

Combustible Dust Hazard :

May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

**WHMIS
NFPA/HMIS**



NFPA SCALE (0-4)

Health	0
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:

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Corn Syrup

CAS 50-99-7	D-Fructose	>75 %
CAS 7732-18-5	water, Purified	<25 %
Percentages are by weight		

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact: Wash affected area with soap and water. Seek medical attention if irritation persists or if concerned.

After eye contact: Protect unexposed eye. Immediately flush eyes with water for at least 15 minutes. Remove contact lenses while rinsing. Immediately get medical assistance.

After swallowing: Dilute mouth with water or milk. Get medical assistance.

Most important symptoms and effects, both acute and delayed:

Nausea. Headache. Shortness of breath. Irritation.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Dust can form an explosive mixture in air.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid contact with skin, eyes, and clothing. Avoid generating dust.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Environmental precautions:

Methods and material for containment and cleaning up:

If necessary use trained response staff or contractor. Clean up spills immediately. Observe precautions for protective equipment. Absorb with suitable absorbent material such as sand or earth and containerize for disposal. Refer to Sections 5, 8, and 10.

Reference to other sections:

SECTION 7 : Handling and storage

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Corn Syrup

Precautions for safe handling:

Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Minimize dust generation. Avoid ingestion and inhalation. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Store away from incompatible materials. Refer to Section 5.

SECTION 8 : Exposure controls/personal protection



Control Parameters:

, , OSHA PEL TWA (Total Dust) 15 mg/m³ (50 mppcf*)

, , ACGIH TLV TWA (inhalable particles) 10 mg/m³

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Normal ventilation is adequate.

Respiratory protection:

Not required under normal conditions of use. Normal ventilation is adequate.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Eye protection:

Safety glasses with side shields or goggles.

General hygienic measures:

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Perform routine housekeeping to prevent dust generation. Before wearing wash contaminated clothing. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear viscous liquid	Explosion limit lower: Explosion limit upper:	Non Explosive Non Explosive
Odor:	Sweet odor	Vapor pressure:	Not Available
Odor threshold:	Not Available	Vapor density:	Not Available
pH-value:	5.9	Relative density:	1.54
Melting/Freezing point:	146.1°C	Solubilities:	Soluble in water
Boiling point/Boiling range:	Not Available	Partition coefficient (n-octanol/water):	Not Available
Flash point (closed cup):	Not Applicable	Auto/Self-ignition temperature:	Not Applicable

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Corn Syrup

Evaporation rate:	Not Available	Decomposition temperature:	Not Available
Flammability (solid,gaseous):	Not Applicable	Viscosity:	a. Kinematic:Not Available b. Dynamic: Not Available
Density: Not Available			

SECTION 10 : Stability and reactivity

Reactivity:None under normal processing.

Chemical stability:Stable under normal conditions.

Possible hazardous reactions:

Conditions to avoid:Excessive heat.Dust generation. Incompatible materials. Refer to Section 5.

Incompatible materials:Strong oxidizers.

Hazardous decomposition products:Carbon oxides.Irritating and highly toxic gases or fumes.

SECTION 11 : Toxicological information

Acute Toxicity:	
Oral:	25,800 mg/kg LD50 Oral - rat
Chronic Toxicity: No additional information.	
Corrosion Irritation: No additional information.	
Sensitization:	No additional information.
Single Target Organ (STOT):	No additional information.
Numerical Measures:	No additional information.
Carcinogenicity:	No additional information.
Mutagenicity:	No additional information.
Reproductive Toxicity:	No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:

Bioaccumulative potential:

Mobility in soil:

Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.Dispose of empty containers as unused product.

SECTION 14 : Transport information

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Corn Syrup

UN-Number

Not Dangerous Goods

UN proper shipping name

Not Dangerous Goods

Transport hazard class(es)

Packing group:Not Dangerous Goods

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)**SARA Section 311/312 (Specific toxic chemical listings):**

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):**Chemicals known to cause cancer:**

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada**Canadian Domestic Substances List (DSL):**

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

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Corn Syrup

SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material. Note:

GHS Full Text Phrases:

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

CFR: Code of Federal Regulations (USA)

SARA: Superfund Amendments and Reauthorization Act (USA)

RCRA: Resource Conservation and Recovery Act (USA)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

TSCA: Toxic Substances Control Act (USA)

NPRI: National Pollutant Release Inventory (Canada)

DOT: US Department of Transportation

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

Effective date : 12.27.2014

Last updated : 03.19.2015



Product Name: WITE-OUT® Brand
Correction Fluids (Super Smooth, Extra
Coverage, and Quick Dry)

SAFETY DATA SHEET

Date Prepared:

May 27, 2015

Version 9

SECTION 1 – IDENTIFICATION

Product Name:	WITE-OUT® Brand Correction Fluids (Super Smooth, Extra Coverage, and Quick Dry)
Synonyms:	Different Products: 1- Quick Dry WQ5- White 2- Quick Dry WQ5- Buff 3- Extra Coverage WE4 4- Super Smooth WS4 5- Cover-It
Product Use:	Correction fluid
Manufacturer/ Vendor Information:	Manufactured for/Distributed by: BIC Corporation One BIC Way, Suite 1 Shelton, CT 06484 USA (203) 783-2000 Emergency Telephone Number: (203) 783-2412 Supplier Information: BIC Inc. 155 Oakdale Road Downsview, Ontario M3N 1W2 CANADA (416) 742-9173 x288 (Business hours)
SDS Contact:	Product Safety
Telephone number:	(203) 783-2124

SECTION 2 – HAZARDS IDENTIFICATION

This product is a consumer product and is not subject to the requirements of OSHA HCS 2012. Nonetheless, this SDS, including the hazard identification in accordance with HCS/HazCom 2012, is provided for the information of product users.

Classification in accordance with 29 CFR § 1910.1200:	Flammable Liquid – Category 2 Specific Target Organ Toxicity – Single Exposure (STOT-SE) – Category 3 (narcotic effects) Aspiration Hazard – Category 1
Signal Word:	Danger
Hazard Statements:	Highly flammable liquid and vapor. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness.
Symbols:	

<p>Precautionary Statements:</p>	<p><u>Prevention:</u> Avoid breathing vapors. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Take precautionary measures against static discharge. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Wear protective gloves/eye protection/face protection.</p> <p><u>Response:</u> Do NOT induce vomiting If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If swallowed: Immediately call a poison center/doctor.</p> <p><u>Storage:</u> Store in a well-ventilated place. Keep cool. Store locked up.</p> <p><u>Disposal:</u> Dispose of contents/container in accordance with local / regional / national / international regulations.</p> <p>9% of the mixture consists of ingredients of unknown acute dermal toxicity</p>
<p>Any Hazards Not Otherwise Classified:</p>	<p>None</p>
<p style="text-align: center;">For more information refer to Section 11 of this SDS</p>	

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS		
Preparation:		
CAS No.	Chemical Name	% by Weight
13463-67-7	Titanium dioxide	30-60%
64741-66-8	Naphtha (petroleum), light alkylate	Products 1-2: 7-13% Products 3-4: 15-40%
64742-49-0	Naphtha, petroleum, hydrotreated light	Products 1-3: 15-40% Product 4: 7-13%

SECTION 4 – FIRST-AID MEASURES	
Eyes:	Quickly and gently blot or brush away chemical. Flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the chemical is removed. If irritation occurs, obtain medical advice.
Skin:	If irritation does occur, flush with lukewarm gently flowing water for 5 minutes or until chemical is removed. Remove contaminated clothing, shoes, and leather goods (e.g. watchbands) as the product is highly flammable. If irritation occurs, obtain medical advice.
Inhalation:	If breathing has stopped, trained personnel should begin artificial respiration (AR) or, if the heart has stopped, cardiopulmonary resuscitation (CPR) immediately. Immediately transport victim to an emergency care facility.
Ingestion:	DO NOT INDUCE VOMITING. Aspiration hazard if swallowed. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Transport victim to an emergency care facility if necessary

Most Important Symptoms and Effects, Both Acute and Delayed	
Symptoms/Injuries after Inhalation:	Deliberately concentrating and inhaling this product can lead to Central Nervous System (CNS) effects, unconsciousness and/or death. Product may be irritating if inhaled accidentally.
Symptoms/Injuries after Skin Contact:	Short-term exposure is expected to cause only slight irritation, if any.
Symptoms/Injuries after Eye Contact:	Mild eye irritation may occur if product comes in contact with eyes.
Symptoms/Injuries after Ingestion:	Ingestion of this product may cause CNS depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. Ingestion of this product may lead to aspiration of the liquid, especially if vomiting occurs. This may result in chemical pneumonitis (inflammation of the lungs) and/or pulmonary edema (an accumulation of fluid in the lungs).
Indication of Any Immediate Medical Attention and Special Treatment Needed	
Treat symptomatically.	

SECTION 5 – FIRE-FIGHTING MEASURES	
Extinguishing Media:	Suitable: CO ₂ , Foam, Dry Chemical Unsuitable: Water stream or jet
Conditions of Flammability:	HIGHLY FLAMMABLE. Can release vapors that form flammable mixtures at or above the flash point.
Special Firefighting Procedures:	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, reactive hydrocarbons, carbonyl compounds, smoke and irritating vapors may be formed on combustion.

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
Personal Precautions:	Highly flammable liquid. Ventilate area.
Methods for Containment and Cleaning Up:	Avoid contaminating sewers, streams, rivers and other watercourses with spilled material absorb with inert absorbent material (do not use combustible materials like cloth or paper) and dispose of properly.

SECTION 7 – HANDLING AND STORAGE	
Handling	
Precautions for Safety Handling:	Highly flammable liquid. Avoid contact with eyes and skin. Wash thoroughly after handling this product if in contact with skin. Avoid contact with heat, and sources of ignition.

Storage	Store in cool, dry, well-ventilated area. Store away from incompatible and reactive materials (See Section 10). Keep container tightly closed. Store away from heat and sources of ignition.
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SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control parameters		
Chemical Name	CAS Number	Exposure Limits
Titanium dioxide	13463-67-7	ACGIH: (TLV-TWA) 10 mg/m ³ OSHA: (PEL-TWA) 15 mg/m ³
Naphtha, petroleum, hydrotreated light	64742-49-0	ACGIH: (TLV-TWA) 400 ppm ACGIH: (TLV-STEL) 500 ppm OSHA: (PEL-TWA) 500 ppm (Recommended based on a similar product – Heptane)

The selection of personal protective equipment varies, depending upon the conditions of use. Use equipment appropriate to your particular use pattern.

Engineering Measures:	For normal application, special ventilation is not necessary.
Eye Protection:	Not required under normal use conditions.
Hand Protection:	None necessary under normal use conditions.
Skin and Body Protection:	None necessary under normal use conditions.
Respiratory Protection:	None necessary under normal use conditions.

ACGIH = American Conference of Governmental Industrial Hygienists
 OSHA = Occupational Safety & Health Administration
 PEL = Permissible Exposure Limit
 TLV = Threshold Limit Values
 TWA = Time-Weighted Average
 STEL = Short-Term Exposure Limit

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Physical State:	Free flowing white liquid
Odor:	Petroleum solvent odor
Odor Threshold:	Not Available
pH:	Not Available
Melting Point:	-22.2 to -13.3°C (-8 to +8°F)
Boiling Point:	95.6-113.9°C (204-237°F)
Flash point:	WQ5: -10°C (14°F) (ASTM D3828-05) WE4: -5°C (23°F) WS4: 0.9°C (33.6°F)
Evaporation Rate:	0.89-1.08 (Butyl Acetate=1)
Flammability (solid/gas):	Highly flammable vapors
Flammable Limits in Air Lower (LFL): Upper (UFL):	1.7% by volume 12.3 % by volume
Vapor Pressure:	26-49 mmHg at 20°C
Vapor Density:	3.4-4.0 (estimated) (air =1)
Density/Specific Gravity:	1.25 (Water =1)
Solubility in Water:	0.1g/L at 20°C

Octanol/ Water Partition Coefficient	Not Available
Auto-ignition Temperature:	~246.1°C (based on petroleum solvent - approximate)
Decomposition Temperature:	Not Available
Viscosity:	Not Available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	This product is stable under the normal conditions of use.
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Not expected to undergo hazardous polymerization.
Conditions to avoid:	Avoid heat sources, sparks or flames and static discharge.
Incompatible Materials:	Avoid strong oxidizing or reducing agents, strong acids and strong bases.
Hazardous Decomposition Products:	Not expected to undergo decomposition.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of Entry:	Skin contact, Inhalation, Eye contact, Skin Absorption, Ingestion		
Acute Toxicity			
<i>Product data:</i>			
<u>Route & Species</u>	<u>Value</u>		
Oral; rat, LD ₅₀	>15 g/kg		
Inhalation; rat LC ₅₀	90-169.4 mg/L/1H		
Dermal, ATE	>5 g/kg		
ATE = acute toxicity estimate			
<i>Ingredient data:</i>			
<u>Chemical</u>	<u>CAS#</u>	<u>Route & Species</u>	<u>Value</u>
Titanium dioxide	13463-67-7	Dermal; rabbit, LD ₅₀	>10 000 mg/kg
Naphtha (petroleum), light alkylate	64741-66-8	Dermal; rabbit, LD ₅₀	>2000 mg/kg
Naphtha petroleum, hydrotreated light	64742-49-0	Dermal; rabbit, LD ₅₀	>3160 mg/kg
Eye Irritation:	Not expected to be an eye irritant based on the results of an <i>in vitro</i> ocular tolerance test.		
Skin Irritation:	Not expected to be a primary skin irritant based on the results of an <i>in-vivo</i> human skin patch test.		
Ingestion Effects:	Ingestion of this product may cause CNS depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. Ingestion of this product may lead to aspiration of the liquid, especially if vomiting occurs. This may result in chemical pneumonitis (inflammation of the lungs) and/or pulmonary edema (an accumulation of fluid in the lungs).		
Inhalation Effects:	Deliberately concentrating and inhaling this product can lead to CNS effects, unconsciousness and/or death.		

Skin Sensitization:	Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.
Respiratory Tract Sensitization:	Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.
Chronic Toxicity	
Carcinogenicity:	Based on the known hazards of the components, the product is not expected to pose a carcinogenicity risk.
Mutagenicity:	This product is not known to contain any components at $\geq 0.1\%$ that have been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a mutagen.
Reproductive Toxicity:	This product is not known to contain any components at $\geq 0.1\%$ that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at $\geq 0.1\%$ that have been shown to cause teratogenicity and/or embryotoxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a teratogen/embryotoxin.
Other Chronic Effects:	Repeated and chronic product abuse such as deliberately concentrating and inhaling this product can result in adverse effects to the CNS such as drowsiness, dizziness and potentially serious long-term health effects.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	Not Available
Persistence/ Degradability:	Not Available
Bioaccumulation:	Not Available
Mobility:	Not Available
Other Adverse Effects:	Not Available

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal Method:	In accordance with local, provincial/territorial or federal guidelines and regulations
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SECTION 14 – TRANSPORT INFORMATION				
	Shipping name	UN Number	Hazard Class	PG
DOT (US)	For domestic transport by road, rail and cargo: Proper Shipping Name: Coating solution Product packaged in containers less than 5 liters can be shipped as Limited quantity or Consumer Commodity	1139	3	II
IMDG	For International transport by cargo vessel, road, rail: Proper shipping name: Coating Solution NOTE: Shipped as Limited Quantity	1139	3	II
IATA	For international transport by Air: Proper Shipping Name: Consumer Commodity	ID8000	9	

DOT = Department of Transport
IMDG = International Maritime Dangerous Goods
IATA = International Air Transport Association

SECTION 15 – REGULATORY INFORMATION			
OSHA Classification: (OSHA Hazard Communication Standard (29 CFR §1910.1200))			
This product has been classified in accordance with the hazard criteria of OSHA's HCS/HazCom 2012 and the SDS contains all the information required by the 29 CFR § 1910.1200			
		Hazard Ratings	
	NPCA/HMIS		NFPA 704
Health:	1		1
Flammability:	3		3
Reactivity:	0		0
All the ingredients in the product are listed on the TSCA inventory. This product requires no labeling as per the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). None of the ingredients in this product are Class I or Class II ozone depleters. None of the ingredients in this product are listed as an Extremely Hazardous Substance under the RCRA, SARA 302/313, Clean Air Act, and Clean Water Act.			
Regulated under SARA 311/312 Acute: no Chronic: no Fire: no			

SECTION 16 – OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION
Preparation Date: May 27, 2015 Supersedes Date: November 10, 2014
Disclaimer: The information given is based on data currently available to us and is believed to be correct. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. No responsibility is assumed for injury or damage from the use of the products described herein.

D

SAFETY DATA SHEET

Damp Rid Moisture Absorbers

Page: 1
Printed: 04/14/2015
Revision: 04/14/2015
Supersedes Revision: 03/26/2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Damp Rid Moisture Absorbers	
Trade Name:	DampRid	
Company Name:	W. M. Barr 2105 Channel Avenue Memphis, TN 38113	Phone Number: (901)775-0100
Web site address:	www.wmbarr.com	
Emergency Contact:	3E 24 Hour Emergency Contact	(800)451-8346
Information:	W.M. Barr Customer Service	(800)398-3892
Intended Use:	To absorb excess moisture from the air.	
Synonyms:	FG0130, FG0130MP, FG0130MT, FG01CAN, FG01D, FG01FS, FG01K, FG01KEN, FG01LV, FG01MT, FG01W, FG02B, FG02WM, FG23, FG30AZ, FG30CAN, FG30FS, FG30K, FG30LV, FG30MT, FG30W, FG36, FG37H, FG40, FG40CS, FG41, FG42, FG45, FG50, FG50AZ, FG50MT, FG50T, FG50WS, FG60, FG60FS, FG60LV, FG60MT, FG8D, FG80, FG80BMT, FG80CAN, FG80CF, FG80CON, FG80CR, FG80D, FG80FC, FG80FF, FG80FFAZ, FG80H, FG80LV, FG80MT, FG80FFCON, FG80FFFC, FG81D, FG81FCD, FG82FCBD, FG82B, FG82BD, FG82BMT, FG82FFB, FG8282FFBD, FG82FFBMT, FG82FCB, FG8282FCBD, FG82FCBMT, FG83C, FG83CAN, FG83FC, FG83H, FG83K, FG83LV, FG83MT, FG83W, FG84, FG84C, FG84CR, FG84HCFS, FG84MT, FG84MTL, FG84MTP, FG84MTW, FG88, FG88AZ, FG90, FG90C, FG90CAN, FG90H, FG90MT, FG91, FG91AZ, FG91CON, FG91D, FG92, FG92CAN, FG92CON, FG92H, FG95, FG95D, FG100, FG100H, FG100MT, FG100PDQ, FG103, FG103MT, FG108, FG110, FG110H, FG118, FG118RV, FG402, FG922, FG9192D, FG9192MT, FG9195D, FG9592D, FG10011PDQ, FG01FSLV33C, FG84HCFS, FG60W, FG01FSLV5C, AS01WMFS, AS01GSLV, FG84HCFS, FG60W, AS101WS, AS102WS, AS103WS, AS104MT, AS01BMLV, AS20FS, AS20LV, AS20CF, FG84HCFSCC, AS01WMB, AS01GSB, AS105BLWS, AS015BWS, AS106BWS, AS106WMBWS, FG50HDWS, AS01WMFS, AS01GSLV, FG118LV, FG118FS, FG84LV, FG84CF, FG118B	
Additional Information	This product is regulated by the United States Consumer Product Safety Commission and is subject to certain labeling requirements under the Federal Hazardous Substances Act. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS). The product label also includes other important information, including directions for use, and should always be read in its entirety prior to using the product.	

2. HAZARDS IDENTIFICATION

Serious Eye Damage/Eye Irritation, Category 2A



GHS Signal Word:	Warning
GHS Hazard Phrases:	H319: Causes serious eye irritation.
GHS Precaution Phrases:	P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.
GHS Response Phrases:	P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention.
GHS Storage and Disposal	No phrases apply.

SAFETY DATA SHEET

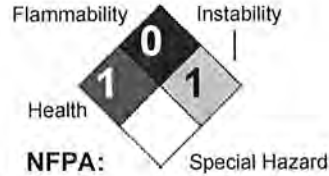
Damp Rid Moisture Absorbers

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Phrases:

Hazard Rating System:

HEALTH	-	1
FLAMMABILITY		0
PHYSICAL		0
PPE		X



HMIS:

OSHA Regulatory Status:

This material is classified as hazardous under OSHA regulations.

Potential Health Effects (Acute and Chronic):

ACUTE INHALATION, SKIN CONTACT, EYE CONTACT: May cause irritation.

INGESTION: May cause nausea.

CHRONIC EFFECTS: None known.

Target Organs: Stomach, Upper Respiratory Tract

Primary Routes of Entry: Ingestion, Inhalation

Medical Conditions Generally None known.

Aggravated By Exposure:

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration	RTECS #
10043-52-4	Calcium chloride	60.0 -100.0 %	EV9800000
7647-14-5	Sodium chloride	1.0 -5.0 %	VZ4725000
7447-40-7	Potassium chloride	1.0 -5.0 %	TS8050000

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

INHALATION: Remove from exposure area to fresh air.

SKIN CONTACT: Remove contaminated clothing and shoes. Wash affected area with soap or mild detergent. Seek medical attention if irritation persists.

EYE CONTACT: Flush eyes with large amounts of water for at least 15 minutes. Get medical attention.

INGESTION: Get medical attention.

Signs and Symptoms Of Exposure:

See Potential Health Effects.

Note to Physician:

None.

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5. FIRE FIGHTING MEASURES

Flammability Classification: Not flammable or combustible.
Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Autoignition Pt: No data.
Suitable Extinguishing Media: Non-combustible liquid - use extinguishing media for underlying cause of fire.
Unsuitable Extinguishing Media: None known.
Fire Fighting Instructions: Negligible fire hazard when exposed to heat or flame. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Extinguish fire using agent suitable for type of surrounding fire and/or chemicals. Do not sure water directly on the material. Avoid breathing corrosive vapors; keep upwind. Dike area to prevent runoff and contamination of water sources.
Flammable Properties and Hazards: Negligible fire hazard when exposed to heat or flame.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Wear appropriate protective gear for the situation. Prevent skin and eye contact. For dry spills, place material in covered, clean dry container for disposal.

7. HANDLING AND STORAGE

Precautions To Be Taken in handling: Observe all federal, state and local regulations when storing this product.
Precautions To Be Taken in Storing: Keep in clean tightly closed dry containers. Store away from incompatible materials.
Other Precautions: None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
10043-52-4	Calcium chloride	No data.	No data.	No data.
7647-14-5	Sodium chloride	No data.	No data.	No data.
7447-40-7	Potassium chloride	No data.	No data.	No data.

Respiratory Equipment (Specify Type): Use of a NIOSH approved respirator should be based on contamination levels in the workplace or situation. When warranted, use a face mask particulate respirator with a NIOSH N95 rating.
Eye Protection: Wear safety glasses with splash shields or safety goggles/shield.
Protective Gloves: Wear appropriate protective gloves to prevent skin contact.
Other Protective Clothing: Wear appropriate protective (impervious) clothing and equipment.
Engineering Controls (Ventilation etc.): Provide local exhaust ventilation.
Work/Hygienic/Maintenance Practices: A source of clean water should be available in the work area for flushing of the eyes and skin.
Wash hands thoroughly after use.
Do not eat, drink, or smoke in the work area.
Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that

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cannot be decontaminated, such as gloves or shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: Gas Liquid Solid
Appearance and Odor: Odorless, white to off-white pellets or flakes.
Melting Point: 369.00 F
Boiling Point: No data.
Autoignition Pt: No data.
Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Specific Gravity (Water = 1): 2.15 at 77.0 F
Density: 15.4 LB/GL at 22.0 C
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate: No data.
Solubility in Water: 40 % at 68.0 F
Percent Volatile: No data.

10. STABILITY AND REACTIVITY

Stability: Unstable Stable
Conditions To Avoid - Instability: Reacts exothermically with water.
Incompatibility - Materials To Avoid: Strong oxidizing agents.
Hazardous Decomposition Or Avoid: None, under normal temperature and pressures.
Byproducts:
Possibility of Hazardous Reactions: Will occur Will not occur
Conditions To Avoid - Hazardous Reactions: No data available.

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11. TOXICOLOGICAL INFORMATION

Toxicological Information: Refer to section 2 for acute and chronic effects.

Chronic Toxicological Effects: CAS# 7647-14-5:
 Standard Draize Test, Eyes, Species: Rabbit, 100.0 MG, 24 H, Moderate.
 Result:
 Kidney, Ureter, Bladder: Changes in liver weight.
 Blood: Changes in erythrocyte (RBC) count.
 Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels:
 Phosphatases.
 - "Sbornik Vysledku Toxikologickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,7, 1972

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
10043-52-4	Calcium chloride	n.a.	n.a.	n.a.	n.a.
7647-14-5	Sodium chloride	n.a.	n.a.	n.a.	n.a.
7447-40-7	Potassium chloride	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose in accordance with applicable local, state, and federal regulations.

14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not Regulated by DOT
DOT Hazard Class:
UN/NA Number:

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
10043-52-4	Calcium chloride	No	No	No
7647-14-5	Sodium chloride	No	No	No
7447-40-7	Potassium chloride	No	No	No

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:
 Yes No Acute (immediate) Health Hazard
 Yes No Chronic (delayed) Health Hazard
 Yes No Fire Hazard
 Yes No Sudden Release of Pressure Hazard
 Yes No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
10043-52-4	Calcium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
7647-14-5	Sodium chloride	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No

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7447-40-7 Potassium chloride

CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes -
Inventory; CA PROP.65: No

16. OTHER INFORMATION

Revision Date: 04/14/2015

Preparer Name: W.M. Barr EHS Dept (901)775-0100

Additional Information About No data available.

This Product:

Company Policy or

Disclaimer:

The information contained herein is presented in good faith and believed to be accurate as of the effective date shown above. This information is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. Any use of this data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.



SAFETY DATA SHEET

122000007045

Diastix

Version 3.0

Revision Date 06/29/2010

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information****Product Name:**DiastixMSDS Number:122000007045**Use** : In Vitro diagnostic reagent.**Company**BAYER HEALTHCARE LLC
Diabetes Care
555 White Plains Road
Tarrytown, NY 10591
UNITED STATES
(800) 348-8100**In case of emergency:** Call Chemtrec
Chemtrec: (800) 424-9300
BAYER INFORMATION PHONE:(800) 348-8100**2. HAZARDS IDENTIFICATION****Emergency Overview****Form:** solid Test strips **Odour:** odourless.**Hazard Communication (29CFR 1910.1200)**

According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

Acute Effects of Exposure	None known.
Chronic Effects of Exposure	None known.
Other Effects of Exposure	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Diastix

Version 3.0

Revision Date 06/29/2010

4. FIRST AID MEASURES

General advice: No hazards which require special first aid measures.

If inhaled: Not an expected entry route.

In case of skin contact: Not considered a health risk.

In case of eye contact: Not considered a health risk.

If swallowed: Give two glasses of water or milk for dilution. Obtain medical attention.

Contact Number: Use the Bayer Emergency Number in Section 1

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Any

Specific hazards during fire fighting: Fire may cause evolution of: Carbon monoxide Carbon dioxide (CO₂)

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.

Methods for cleaning up: Place in closed containers. Label for proper disposal.

7. HANDLING AND STORAGE**Handling:**

No special precautions required.

Storage:

Store at temperatures and conditions as indicated on the product label.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Respiratory protection:**

not required

Hand protection:

not required

Other protective measures:No special protective equipment required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Test strips
Odour:	odourless
Melting point:	no data available
Density:	no data available
Bulk density:	no data available
Vapour pressure:	not applicable
Water solubility:	insoluble
pH:	not applicable
Partition coefficient (n-octanol/water):	no data available
Solubility in organic solvents:	no data available
Flash point:	not applicable
Ignition temperature:	not applicable

10. STABILITY AND REACTIVITY**Conditions to avoid:** The enclosed instructions for use should be consulted prior to use.**Materials to avoid:** Oxidizing agents**Hazardous reactions:** None known.**Thermal decomposition:**

no data available

Diastix

Version 3.0

Revision Date 06/29/2010

Hazardous decomposition products:Carbon monoxide, Carbon dioxide (CO₂)**Auto-flammability:**no data available

11. TOXICOLOGICAL INFORMATION**Other information on toxicity:**

No data is available on the product itself.

According to our experience and information the product has no harmful effects on health if properly handled.

12. ECOLOGICAL INFORMATION**General advice:**No information on ecology is available.

13. DISPOSAL CONSIDERATIONSWaste disposal should be in accordance with existing federal, state and local environmental control laws.

14. TRANSPORT INFORMATION**Land transport (DOT)**

Non-Regulated

Inland waterway transport

Non-Regulated

Railway transport

Non-Regulated

Sea transport (IMDG)

Non-Regulated

Air transport (ICAO / IATA cargo aircraft only)

Non-Regulated

Air transport (ICAO / IATA passenger and cargo aircraft)

Non-Regulated

Diastix

Version 3.0

Revision Date 06/29/2010

15. REGULATORY INFORMATION

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Components

None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

Components

None

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components

None

California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

OSHA Hazcom Standard Rating Non-Hazardous

16. OTHER INFORMATION**HMIS Rating**

Health	0
Flammability	0
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.



Diastix[®] Reagent Strips/Technical Information

A Visual Urine Test for Glucose

SUMMARY AND EXPLANATION:

DIASTIX[®] Reagent Strips provide a fast, convenient way of testing urine for the presence and concentration of glucose.^{1,2,3} Test results provide information on carbohydrate metabolism.

The reagent test area on DIASTIX is ready to use upon removal from the bottle. When dipped in urine, the test area changes color according to the amount of glucose in the urine. The reagent strips must be kept in the bottle with the cap closed tightly to provide optimal results. Use of DIASTIX Reagent Strips can alert you and your doctor to changes in your condition for which adjustments in your diet and/or medication may be needed. Carefully follow the testing schedule your doctor establishes.

CHEMICAL PRINCIPLES OF THE PROCEDURE:

This test is based on a double sequential enzyme reaction. One enzyme, glucose oxidase, catalyzes the formation of gluconic acid and hydrogen peroxide from the oxidation of glucose. A second enzyme, peroxidase, catalyzes the reaction of hydrogen peroxide with a potassium iodide chromogen to oxidize the chromogen to colors ranging from green to brown.

REAGENTS:

At the time of impregnation, 2.2% w/w glucose oxidase (microbial, 1.3 IU); 1.0% w/w peroxidase (horseradish, 3300 IU); 8.1% w/w potassium iodide; 69.8% w/w buffer; 18.9% w/w nonreactive ingredients.

WARNINGS AND PRECAUTIONS:

DIASTIX Reagent Strips are for *in vitro* diagnostic use. They have been determined to be nonhazardous under the guidelines issued by OSHA in 29CFR 1910.1200(d).

STORAGE:

Store at temperatures between 59°-86°F (15°-30°C) and out of direct sunlight. Use within 6 months after first opening. Always write the date you first opened the bottle on the bottle label. Do not use product (opened or unopened) after expiration date. Use of strips beyond expiration date may yield low results.

RECOMMENDED PROCEDURES FOR HANDLING DIASTIX:

All unused strips must remain in the original bottle. Transfer to any other container may cause reagent strips to deteriorate and become unreactive. Do not remove desiccant. Replace cap immediately and tightly after removing reagent strip. Do not touch test area of the reagent strip. Keep reagent test area away from detergents that may be found in specimen containers and other contaminating substances found in working areas. Dip test area in urine completely, but briefly, to avoid dissolving out reagents. Read test result carefully within 30 seconds, in a good light and with the test area held near the Color Chart on the bottle label.

IMPORTANT: PROTECTION AGAINST AMBIENT MOISTURE, LIGHT AND HEAT IS ESSENTIAL TO GUARD AGAINST ALTERED REAGENT REACTIVITY. Discoloration or darkening of reagent areas may indicate deterioration. If proper results are not obtained with positive and/or negative controls, discard bottle and contents and retest with fresh reagent strips.

SPECIMEN COLLECTION AND PREPARATION:

Collect urine in a clean container and test it as soon as possible. If testing cannot be done within an hour after voiding, refrigerate the specimen immediately and let it return to room temperature before testing. Prolonged exposure of unpreserved urine to room temperature may result in microbial contamination and bacterial consumption of urine glucose. Some preservatives do not adequately protect glucose from being metabolized by contaminating or infecting organisms. Urine preservatives may affect test results. Further information regarding the affects of urine preservatives on Bayer Diagnostics urinalysis products may be obtained by writing our Customer Service Department or by calling toll free 1-800-348-8100 and requesting Technical Report No. 8-82.

QUALITY CONTROL IN PROFESSIONAL USE:

To check DIASTIX Reagent Strip reactivity, use CHEK-STIX[®] Positive and Negative Control Strips.

RESULTS:

Results with DIASTIX Reagent Strips are obtained directly from comparison to the Color Chart. The color blocks represent nominal values; actual values will vary around the nominal values. Results are read from the Color Chart as negative or varying degrees of positive which indicate the relative amounts of glucose present. Color blocks are designated as Negative, 1/16% (100 mg/dL), 1/8% (250 mg/dL), 1/4% (500 mg/dL), 1% (1000 mg/dL) and 2% or more (2000 mg/dL or more).

LIMITATIONS OF PROCEDURES:

As with all laboratory tests, definitive diagnostic or therapeutic decisions should not be based on any single result or method. DIASTIX results should never be used as the sole basis for adjusting insulin dosage.

Substances that cause abnormal urine color, such as drugs containing azo dyes (e.g., Pyridium[®], Azo Gantrisin[®], Azo Gantranol[®]), nitrofurantoin (Macrochantin[®], Furadantin[®]), and riboflavin, may affect the readability of the glucose reagent area on urinalysis reagent strips. The color development on the reagent pad may be masked, or a color reaction may be produced on the pad that could be interpreted as a false positive.

Ascorbic acid concentrations of 50 mg/dL or greater may cause false negatives for specimens containing small amounts of glucose (75-125 mg/dL). Ketone bodies reduce the sensitivity of the test; moderately high ketone levels (40 mg/dL) may cause false negatives for specimens containing small amounts of glucose (75-125 mg/dL), but the combination of such ketone levels and low glucose levels is metabolically improbable in screening. The reactivity of the glucose test decreases as the SG of the urine increases. Reactivity may also vary with temperature.

EXPECTED VALUES:

Small amounts of glucose are normally excreted by the kidney.* These amounts are usually below the sensitivity of this test but on occasion may produce a color between the negative and the 100 mg/dL color blocks. Results of 100 mg/dL may be significantly abnormal if found consistently.

SPECIFIC PERFORMANCE CHARACTERISTICS:

Specific performance characteristics are based on clinical and analytical studies. In clinical specimens, the sensitivity depends upon several factors: the variability of color perception; the presence or absence of inhibitory factors typically found in urine, the specific gravity, and the pH (see LIMITATIONS OF PROCEDURES section); and the lighting conditions under which the product is read. Because the color of each reagent area changes as the analyte concentration increases, the percentage of specimens detected as positive will increase with the analyte concentration.

Each color block represents a range of values. Because of specimen and reading variability, specimens with analyte concentrations that fall between nominal levels may give results at either level. Results at levels greater than the second positive level will usually be within one level of the true concentration. The generally detectable level of glucose in contrived urine is 75-125 mg/dL; however, because of the inherent variability of clinical urines, lesser concentrations may be detected under certain conditions.

The test is specific for glucose; no substance excreted in urine other than glucose is known to give a positive result. The reagent area does not react with lactose, galactose, fructose nor reducing metabolites of drugs (e.g., salicylates and nalidixic acid). This test may be used to determine whether the reducing substance found in urine is glucose. In dilute urines containing less than 5 mg/dL ascorbic acid, as little as 40 mg/dL glucose may produce a color change that might be interpreted as positive. Reactivity may be influenced by urine specific gravity and temperature. The test is more sensitive than the copper reduction test, CLINITEST[®] Reagent Tablets. If the color appears somewhat mottled at the higher glucose concentrations, match the darkest color to the color blocks.

AVAILABILITY:

DIASTIX Reagent Strips are available in bottles of 50 strips (#2806) and 100 strips (#2803).

BIBLIOGRAPHY:

- Free, A. H. and Free, H. M.: Urinalysis, critical disciplines of Clinical Science; *CRC Crit. Rev. Clin. Lab. Sci.* 3(4): 481-531, Dec., 1972.
- Court, J. M., Davies, H. E. and Ferguson, R.: Diastix and Keto-Diastix, A new semiquantitative test for glucose in urine; *Med. J. Aust.* 1:525-528, March, 1972.
- Traisman, H. S. and Greenwood, R. D.: A comparative clinical evaluation of a new proprietary method for urine testing in juvenile diabetics. *Clin. Pediatrics* 12:357, 1973.
- Schersten, B. and Fritz, H.: Subnormal Levels of Glucose in Urine. *JAMA* 201: 129-132; 1967.

TRADEMARKS

Pyridium[®] is a registered trademark of Parke-Davis.
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Bayer Corporation
Diagnostics Division
Elkhart, IN 46515 USA

SAFETY DATA SHEET



Issuing Date: 05-Mar-2015

Revision Date: 05-Mar-2015

Version 1

1. IDENTIFICATION

Product Name	Dawn Ultra Antibacterial - Orange
Product ID:	99488499_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended Use	Dish Care
Restrictions on Use	Use only as directed on label.
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division. Ivorydale Technical Centre. 5289 Spring Grove Avenue, Cincinnati, Ohio 45217-1087 USA
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows.:

Hazard Category

Eye Damage / Irritation Category 2B

Signal Word WARNING

Hazard Statements Causes eye irritation

Hazard pictograms None

Precautionary Statements - Prevention Wash hands thoroughly after handling

Precautionary Statements - Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF SWALLOWED:
Drink 1 or 2 glasses of water

Precautionary Statements - Storage None

Precautionary Statements - Disposal None

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	-	No	68585-47-7	10 - 15
Amine oxides, C10-16-alkyldimethyl	-	No	70592-80-2	1 - 5
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	-	No	68585-34-2	1 - 5
Ethanol	-	No	64-17-5	1 - 5
Phenoxyethanol	-	No	122-99-6	1 - 5
Chloroxylenol	-	No	88-04-0	0.1 - 1.0
Citrus Aurantium Dulcis Oil	-	No	8008-57-9	0.1 - 1.0
Limonene	-	No	5989-27-5	0.1 - 1.0

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO₂, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

Advice for emergency responders Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m ³	TWA: 1000 ppm TWA: 1880 mg/m ³	STEL: 1000 ppm	STEL: 1000 ppm
Phenoxyethanol	122-99-6			TWA: 25 ppm TWA: 141 mg/m ³ Skin	

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection	Distribution, Workplace and Household Settings: No special protective equipment required
	Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Use appropriate eye protection
Hand Protection	Distribution, Workplace and Household Settings: No special protective equipment required
	Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Protective gloves
Skin and Body Protection	Distribution, Workplace and Household Settings: No special protective equipment required
	Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Wear suitable protective clothing
Respiratory Protection	Distribution, Workplace and Household Settings: No special protective equipment required
	Product Manufacturing Plant (needed at Product-Producing Plant ONLY): In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid	
Appearance	Various color by product	
Odor	Scented	
Odor threshold	No information available	
Property	Values	Note
pH value	9	10% aqueous solution
Melting/freezing point	No information available	
Boiling point/boiling range	No information available	
Flash point	46.1 - 57.2 °C / 115 - 135 °F	Product is an aqueous solution containing <= 24% alcohol and > 50% water
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Viscosity of Product	No information available	
VOC Content (%)	Products comply with US state and federal regulations for VOC content in consumer products.	

10. STABILITY AND REACTIVITY

Reactivity	None under normal use conditions.
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Stability	Stable under normal conditions.
Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.
Conditions to Avoid	None under normal processing.
Materials to avoid	None in particular.
Hazardous Decomposition Products	None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	Irritating to eyes.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Amine oxides, C10-16-alkyldimethyl	70592-80-2	1330.00 mg/kg (rat)	-	-
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-
Phenoxyethanol	122-99-6	1850 mg/kg (rat)	2214 mg/kg (rat)	> 1 mg/L (OECD 412, rat)

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	SARA 313 - Threshold Values %
Phenoxyethanol	122-99-6	1.0

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substance(s) which are either listed as hazardous air pollutants (HAPS) or VOC's per the Clean Air Act:

Chemical Name	CAS-No	CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
Phenoxyethanol	122-99-6	X

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Ethanol	64-17-5	X
Phenoxyethanol	122-99-6	X

Chemical Name	CAS-No	Massachusetts
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Ethanol	64-17-5	X
Phenoxyethanol	122-99-6	X
Sodium hydroxide	1310-73-2	X

International Inventories

United States

All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada

This product is in compliance with CEPA for import by P&G.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 05-Mar-2015

Revision Date: 05-Mar-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

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MATERIAL SAFETY DATA SHEET

Page 1 of 2

Product identity: **Dried Egg Whites – All Types**
(code #2010, #2110, #2210)

SECTION 1 – MANUFACTURER INFORMATION

Manufacturer: **Ballas Egg Products Corp.**
40 North Second St.
Zanesville, Ohio 43701

Telephone No.: **(740) 453-0386**
Emergency Telephone No: **(740) 453-0386**
Date Prepared: **6/26/2001**

SECTION 2 – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous components: **None applicable**

SECTION 3 – PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling point: **Not applicable**
Vapor Pressure: **Not applicable**
Vapor Density: **Not applicable**
Solubility in Water: **100%**
Specific Gravity: **Approx. 1.04 (Liquid and Frozen Egg Products)**
Density: **Approx. 26.6 lbs./ft³ (Dried Egg Products)**
Melting Point: **Not applicable**
Evaporation Rate: **Not applicable**
Appearance: **White in color; Odor typical of dried eggs**

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point: **Non-Flammable**
Flammable Limits: **Not applicable**
Extinguishing Media: **Use extinguishing media appropriate for the surrounding fire.**
Special Fire Fighting Procedures: **Not applicable**
Unusual Fire/Explosion Hazards: **Not applicable**

SECTION 5 – REACTIVITY DATA

Stable: **Yes**
Conditions to avoid: **Not applicable**
Incompatibility: **Not applicable**
Hazardous Decomposition
By Products: **Spoiled egg products may create sulfur dioxide and/or
ammonia vapors.**
Hazardous Polymerization: **Not applicable**

MATERIAL SAFETY DATA SHEET

Page 2 of 2

Product identity: **Dried Egg Whites – All Types**
(code #2010, #2110, #2210)

SECTION 6 – HEALTH HAZARD DATA

Inhalation:	Avoid breathing dust or spray mist.
Eyes:	Avoid contact with eyes.
Skin:	Not applicable
Ingestion:	Not applicable
Health Hazards:	Not applicable
Carcinogenicity:	Not applicable
Signs and Symptoms of Exposure:	Not applicable
Medical Conditions Aggravated By Exposure:	Persons with severe allergies may be sensitive to egg products, especially egg whites.
Emergency and First Aid Procedures:	Eyes: Immediately flush eyes with plenty of water for at least 15 minutes.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING AND USE

Waste Disposal Method:	Spilled material may be discarded with other solid waste without additional restrictions. Disposal into sanitary sewers must be done in accordance with all applicable laws.
Precautions To Be Taken In Storage and Handling:	Store according to recommendations on label. Product labeled “FROZEN” must be stored at 0°F to 10°F until ready to thaw for use. Product labeled “LIQUID” must be stored at 40°F or below at all times. Do not refreeze egg products once thawed. Do not exceed recommended shelf life. Do not allow material to spoil inside an enclosed vessel.

SECTION 8 – CONTROL MEASURES

Respiratory Protection:	Approved dust mask as required; exposure 15mg/m³ per CFR 1910.1001.
Ventilation:	Not applicable
Protective Gloves:	Not applicable
Eye Protection:	Safety goggles with all powdered product.
Other Protective Clothing or Equipment:	Not applicable

Statements made in this Material Safety Data Sheet are offered for informational purposes only and are intended to be followed only by persons having related technical skills and at their own discretion and risk. Since condition and manner of use are outside the control of the manufacturer, this company makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.

Last update: 12/16/06

BIO

CORPORATION

MATERIAL SAFETY DATA SHEET

Last Revision: December 2005

3911 Nevada Street
Alexandria MN 56308

320-763-9094
800-222-9094

SECTION 1: MATERIAL IDENTIFICATION

PRODUCT NAME: **EMBALMING FLUID** (Squid preservative)
CHEMICAL NAME: MIXTURE
MANUFACTURER: BIO COMPANY INC.
EMERGENCY: CHEMTREC 1-800-424-9300;
BIO CORPORATION 1-320-763-9094

HMIS HAZARD	
4 - Extreme	HEALTH.....3
3 - High	FIRE2
2 - Moderate	REACTIVITY ...0
1 - Slight	OTHER
0 - Least	

SIGNATURE / DATE *Bill Waddel* 12-30-05

SECTION 2: HAZARDOUS INGREDIENTS

HAZARDOUS CHEMICAL	CAS #	PERCENT	PEL/TWA	SARA III, SEC 313
Ethylene Glycol	107-21-1	5.0%	50 ppm	YES
Phenol	108-95-02	2.7%	5 ppm	YES
Formalin	50-00-00	1.8%	.75 ppm	YES
Water	7732-185	90.5%		

SECTION 3: CHEMICAL & PHYSICAL PROPERTIES

Appearance:	Clear, colorless liquid
Odor:	Pungent, irritating
Boiling Point (°F):	210
Freezing Point (°F):	32
Chemical composition:	Mixture
Specific Gravity (H ₂ O=1 @ 70°F):	>1.0
Water solubility:	Soluble
Vapor Pressure (mm Hg):	>1.0
Percent Volatile By Volume:	9.5 %
Evaporation Rate (Butyl Acetate = 1)	<1.0
Vapor Density (Air = 1)	ND

SECTION 4: FIRE & EXPLOSION HAZARDS

FLAMMABLE MATERIAL:	NO
FIRE / EXPLOSION HAZARD SUMMARY:	Not a fire hazard when exposed to heat or flame
FLASHPOINT:	180°F/82°C
AUTO IGNITION TEMPERATURE:	>932°F/500°C
LOWER EXPLOSION LIMIT:	Non-combustible material
UPPER EXPLOSION LIMIT:	Non-combustible material
EXTINGUISHING:	Mediates best for surrounding fire conditions
FIREFIGHTING:	Use best for surrounding fire-fighting conditions

— SECTION 5: REACTIVITY INFORMATION —

STABILITY: Normally stable to air, water, and light

INCOMPATIBILITY: Avoid strong oxidizing agents such as: nitrates, perchlorates or concentrated sulfuric, nitric, or acetic acids. Material may be reactive with potassium t-butoxide. **AVOID ANY CONTACT WITH HYDROCHLORIC ACID.** Resultant product may contain BIS-chloromethyl ether, and OSHA-regulated carcinogen

HAZARDOUS DECOMPOSITION PRODUCTS: Formaldehyde gas, carbon monoxide and carbon dioxide

HAZARDOUS POLYMERIZATION: Non-hazardous polymerization may occur at low temperatures, forming paraformaldehyde, a white solid.

CONDITIONS TO AVOID: Strong oxidizing agents; excessive heating of material.

— SECTION 6: HEALTH HAZARDS - PROTECTIVE MEASURES - FIRST AID —

EXPOSURE LIMITS: Formalin OSHA: 0.75ppm (PEL)/2ppm (15 min.STEL)LC50 (rat, inhalation): 478ppm/LD50 (rat, oral) 500mg/kg LD50 (rabbit, skin):270mg/kg
Phenol OSHA/ACGIH 55ppm (skin) MAK 5ppm (skin)
Trace Ingredients Not listed.

EYES: Contact may cause irritation. Rinse both upper and lower eyelids for 15 minutes with clean water. If irritation persists contact a physician.

SKIN: Prolonged skin contact may cause irritation in hypersensitive individuals. Remove any saturated clothing; wash skin with soapy water. If irritation persists contact a physician.

INHALATION: May produce short term upper respiratory irritation. Remove to fresh air, if breathing has stopped, administer CPR; contact a physician immediately. Off-gassing of small amounts of formaldehyde gas possible. Sensory threshold below PEL. If irritating effects are noticed remove to fresh air. If symptoms persist (>30 minutes): contact a physician.

INGESTION: **TOXIC, INDUCE VOMITING.** If conscious, give 8-10oz. (240-300ml) of water to dilute material in stomach. Induce vomiting by gastric lavage at once. Repeat. Have victim lean forward to minimize aspiration. Contact physician immediately.

IN ALL CASES: GET PROMPT MEDICAL ATTENTION IF ADVERSE EFFECTS DEVELOP.

PRIMARY ROUTES OF ENTRY: Skin, eyes, inhalation, ingestion.

HYGIENE: Wash hands and face before eating or drinking. Wash soiled clothing before wearing again.

— SECTION 7: PRECAUTIONS FOR SAFE HANDLING, STORAGE & USE —

PERSONAL PROTECTION EQUIPMENT: Splash-proof eye goggles, nitrile gloves, apron, sleeve protector.

OTHER PROTECTIVE EQUIPMENT: Eyewash station within 15 second walk from production activities.

SMALL SPILLS: Cover spill area with sorbent material. Wipe up. Evaporate saturated sorbent material to dryness in chemical fume hood or outdoors: discard dry, material as solid waste.

DISPOSAL: This material is not considered a hazardous waste by E.P.A. and may be discharged to a sanitary sewer (if local regulations permit). Discharge, treatment and disposal may be subject to Federal, State/Provincial and local regulations.

STORAGE AND HANDLING: Keep containers closed. Store away from heat or ignition sources. Do not heat above 140 F. Do not eat or smoke where embalming fluid is being used or handled. Wear impervious clothing as needed to prevent exposure while handling.

— SECTION 8: SPECIAL PROTECTION INFORMATION —

VENTILATION: Local exhaust ventilation recommended to assure formaldehyde PEL compliance. Monitor effectiveness using passive dosimeter badge.

RESPIRATORY PROTECTION: Monitor for STEL/PEL compliance. Use NIOSH approved formaldehyde vapor respirator if PEL OR STEL is expected to be exceeded.

SKIN PROTECTION: (EXCELLENT/GOOD): Nitrite or butyl rubber gloves. (GOOD/FAIR): Natural rubber, neoprene rubber when working with this material, or with dissection specimens fixed in this material.

EYE PROTECTION: Splash-proof chemical safety goggles. Wear NO CONTACT LENSES during use of this material, or during dissection activities.

OTHER PROTECTIVE EQUIPMENT: Eye-wash station in close proximity. Sleeve protectors recommended

— SECTION 9: REGULATORY INFORMATION —

DOT CLASSIFICATION:

HAZARD CLASSIFICATION: IRRITANT

OTHER REGULATORY GUIDELINES: CALIFORNIA PROPOSITION #65: WARNING: This product a chemical known to the State of California to cause cancer.

RIGHT-TO-KNOW LABELING: Embalming Fluid.

IRRITANT:

Hazardous Components (v/v): Formalin(<5.096) CAS#50-00-00 IARC – listed chemical.

Phenol (>396) CAS# 107-21-1

SAFETY EQUIPMENT: Nitrile/butyl rubber gloves, splash-proof chemical goggles, apron, sleeve protectors. Eyewash station in close proximity.

The information contained herein is given in good faith, but no warranty, representation, inducement or license of any kind is made, except that the information is accurate to the best of Bio Corporation's knowledge or is obtained from sources believed by Bio Corporation to be reliable and accurate. Bio Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions as well as the Material Data Safety Sheet.

specimen preservative (squid)

1. Product and Company Identification

Product Name Embalming Fluid
 Synonyms None
 Recommended Use Preserving Specimens
 Company Identification Bio Corporation
 3910 Minnesota Street SW
 Alexandria, MN 56308
 Telephone Bio Corporation 1-800-222-9094
 CHEMTREC 1-800-424-9300

2. Hazards Identification

GHS Classification Eye irritation (category 2a), skin irritation (category 2), Acute toxicity (oral, dermal, inhalation) category 4, respiratory irritation (category 3), carcinogenicity (category 2)

Pictogram
 The pictogram consists of two diamond-shaped symbols. The left symbol shows a stylized human figure with a starburst on the chest, representing a health hazard. The right symbol shows an exclamation mark, representing a warning.

Signal Word Danger Warning

Hazard Statement(s) Harmful if swallowed.
 Causes skin irritation.
 Causes eye irritation.
 May cause an allergic skin reaction.
 May cause respiratory irritation.
 Possible Carcinogen.

Precautionary Statement(s) Read all safety information before use.
 Wash skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/ protective clothing/ eye protection.
 IF SWALLOWED: Call a POISON CONTROL CENTER
 IF ON SKIN (or hair): Wash with soap and water then rinse thoroughly. If skin irritation or rash occurs get medical advice or attention.
 IF INHALED: If breathing becomes difficult remove person to fresh air and keep comfortable for breathing. If concerned get medical attention.
 IF IN EYES: Rinse cautiously with water for a minimum of 15 minutes. Remove contact lenses, if present and easy to do so.
 If concerned get medical advice/attention.
 Keep container tightly closed. Store in a cool, dry, well-ventilated place.
 Dispose of contents/container in accordance with local/regional/national regulations.

3. Composition/Information on Ingredients**Mixture**

Ingredient Name	CAS Number	%
Water	N/A	> 90.5
Ethylene Glycol	107-21-1	< 5.0
Phenol	108-95-02	< 2.7
Formalin	50-00-0	< 1.8

4. First Aid Measures

Eye Contact	Rinse cautiously with room temperature water for at least 15 minutes. Remove contact lenses, if present and easy to do. Consult a physician if irritation persists.
Skin Contact	After contact with skin, wash with plenty of soap and water and seek medical advice if needed.
Inhalation	Move person to fresh air. Have them rest in a comfortable position and seek medical advice if needed.
Ingestion	Call Poison Control. Do NOT induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. Firefighting Measures**Extinguishing Media**

Suitable	Water spray, dry chemical, carbon dioxide or appropriate foam.
Not Suitable	No data available.
Fire-fighting Methods and Protection	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire & Explosion Hazards	Fire or excessive heat may produce hazardous decomposition products.

6. Spill or Leak Procedures

Personal Precautions, Protective equipment and Emergency procedures	Avoid direct eye and skin contact, breathing vapors maybe irritating. Use gloves and eye protection, ventilate area of the spill, wash down with water or absorb with paper towels or granulated clay, then dispose of properly.
Environmental Precautions	Follow local state and federal regulations regarding releases.

7. Handling and Storage

Handling	Wear protective gloves and safety glasses. Avoid direct eye and skin contact. Do not eat, drink or smoke when using this product.
Storage	Keep containers closed. Store in a cool, dry, well-ventilated place.

8. Exposure Controls/Personal Protection

Ingredient Name	ACGIH TLV	OSHA PEL
Ethylene Glycol	100 mg/m ³	125 mg/m ³
Phenol	5 ppm	5 ppm - TWA
Formalin	0.37 mg/m ³	0.75 ppm – 8-hr TWA 2 ppm STEL (15 min)
Engineering Measures	Room ventilation might be needed to insure operator comfort and to keep levels below exposure limits.	
Hygiene Measures	Avoid contact with skin, eyes and clothing. Wash hands with soap and water after handling the product.	

Respiratory	None should be needed if normal room conditions exist. If airborne concentrations are above the applicable exposure limits use NIOSH-approved respiratory protection.
Eyes and Face	Wear safety goggles or glasses while handling this product.
Skin	Wear gloves and protective clothing.

9. Physical and Chemical Properties

Appearance	Clear, colorless liquid
Odor	Medicinal, Pungent
Odor threshold	Not Determined
pH	6.9
melting /Freezing Point (°F)	Not Determined
Boiling Point / Range (°F)	Not determined
Flash Point	Not Determined
Evaporation rate (butyl acetate = 1)	Not determined
Flammability	Not determined
Upper / lower flammability	Not determined
Vapor Pressure (mm Hg, 20 °C)	Not determined
Vapor Density (air = 1)	Not determined
Relative Density	Not determined
Solubility	Soluble
Partition coefficient	Not determined
Auto ignition temperature	Not determined
Decomposition temperature	Not determined
viscosit	Not determined

10. Stability and Reactivity

Reactivity	Not Reactive
Chemical stability	Stable
Hazardous Reactions	None Known
Conditions to Avoid	None Known
Materials to Avoid	Strong Acids, Strong Oxidizing Agents
Decomposition Products	Carbon Monoxide, Carbon Dioxide, other Hydrocarbons
Hazardous Polymerization	Will Not Occur

11. Toxicological Information

Eye	May cause eye irritation.
Ethylene Glycol	Eyes - rabbit – mild eye irritation – 24 hr
Phenol	Eyes – rabbit – no data available
Formalin	Eyes - rabbit – eye irritation – 24 hr
Dermal	May be harmful if absorbed through skin.
Ethylene Glycol	Dermal LD50 – rabbit – 10,626 mg/kg
Phenol	Dermal LD50 – no data available
Formalin	Skin corrosion/irritation: no data available
	Dermal LD50 – rabbit – 270 mg/kg
	Skin corrosion/irritation: no data available
Inhalation	May be harmful if inhaled.

Ethylene Glycol	Inhalation LC50 – no data available
Phenol	Inhalation LC50 – no data available
Formalin	Inhalation LD50 – rat – 590 ppm – 4 hr
Oral	Harmful if swallowed.
Ethylene Glycol	Oral LD50 – rat – 4,700 mg/kg
Phenol	Oral LD50 – no data available
Formalin	Oral LD50 – rat – 800 mg/kg

Potential Chronic Health Effects

Carcinogenicity	No Data Available
Mutagenicity	No Data Available
Teratogenicity	No Data Available
Fertility Effects	No Data Available

12. Ecological Information

Eco toxicity	Toxicity to fish: LC50 – oncorhynchus mykiss (rainbow trout) – 18,500 mg/l – 96 hr. (Ethylene Glycol) NOEC – pimephales promelas (fathead minnow) – 39,140 mg/l – 96 hr. (Ethylene Glycol) LD50 - oncorhynchus mykiss (rainbow trout) – 8.9-12.3 mg/l – 96 hr. (Phenol) LD50 – pimephales promelas (fathead minnow) – 11.5-50.9 mg/l – 96 hr. (Phenol) LC50 – fish – > 10 mg/l – 96 hr (Formalin) Toxicity to aquatic invertebrates: NOEC – daphnia – 24,000 mg/l – 48 hr. (Ethylene glycol) LC50 – daphnia magna (water flea) – > 41,000 mg/l – 48 hr. (Ethylene Glycol) EC50 – Daphnia magna (water flea) – 10.2-15.19 mg/l - 48 hr (Phenol)
Biodegradability	Concentration factor – 0.60 (Ethylene Glycol) Phenol – Biodegradable Formalin – Biodegradable
Bioaccumulation	Concentration is not expected to occur.
Mobility	No Data
Other adverse effects	No other adverse effects known.

13. Disposal Considerations

Waste Disposal	Dispose of in accordance with all applicable Federal, State and Local Regulations.
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14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Embalming Fluid	Same
Hazard Class	N/A	Same
Identification Number	N/A	Same
Packing Group	N/A	Same

Reportable Quantities

N/A

Same

15. Regulatory Information

SARA Title III Section 313

This product is known to contain the following chemicals which are listed in 40 CFR 372.65 As chemicals requiring notification. This information must be included in all SDS's that are copied and distributed for this product.

Ethylene Glycol – CAS# 107-21-1**Phenol – CAS# 108-95-02****Formalin – CAS# 50-00-0**TSCA – Toxic Substances
Control Act

All components of this product are listed on the TSCA Inventory or are excluded from listing requirements.

RCRA – Resource
Conservation and Recovery
Act

The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA's four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

16. Other Information

Revised: 5-4-2016

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Bio Corporation's knowledge, or is obtained from sources believed by Bio Corporation to be reliable and accurate. Bio Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own research before using any product and read the Safety Data Sheet.



SAFETY DATA SHEET

MAGNESIUM SULPHATE - EPSOM SALTS

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

PRODUCT NAME: MAGNESIUM SULPHATE - EPSOM SALTS
CHEMICAL NAME 2: MAGNESIUM SULPHATE HEPTAHYDRATE
PART No.: RM152
SUPPLIER: J M Loveridge plc
Southbrook Road, Southampton
Hampshire
SO15 1BH
Tel: 023 8022 2008
Fax: 023 8022 2117

2. COMPOSITION/INFORMATION ON INGREDIENTS:

EEC (EINECS) No. 231-298-2
CAS No.: 10034-99-8

3. HAZARDS IDENTIFICATION:

Not regarded as a health hazard under current legislation.

4. FIRST AID MEASURES:

GENERAL: IN ALL CASES OF DOUBT OR WHEN SYMPTOMS PERSIST, ALWAYS SEEK MEDICAL ATTENTION

INHALATION: Remove affected person from exposure, rest and keep warm. If recovery not rapid or complete seek medical attention.

INGESTION: DO NOT INDUCE VOMITING. In case of spontaneous vomiting, be sure that vomit can freely drain because of danger of suffocation. Only when conscious, rinse mouth with plenty of water and give plenty of water to drink - (approx 500ml). Obtain medical attention if adverse symptoms occur.

SKIN: Causes mechanical irritation. Wash affected area with plenty of soap and water. If irritation persists, seek medical attention.

EYES: Rinse immediately with plenty of water for at least 5 minutes while lifting the eye lids. Seek medical attention. Continue to rinse.

5. FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA:	Non combustible or flammable and normally not a fire risk. Use extinguishing media suitable against surrounding fire or the cause of fire.
HAZARDOUS COMBUSTION PRODUCTS:	Toxic or corrosive vapours may be released in fire situation. - oxides of sulphur.
PROTECTIVE MEASURES IN FIRE:	Fire fighters should wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES:

PERSONAL PRECAUTION IN SPILL:	Avoid breathing dust.
PRECAUTIONS TO PROTECT ENVIRONMENT:	Prevent contamination of soil, drains and surface water.
SPILL CLEANUP METHODS:	Avoid dry sweeping or other methods which raise dust. Vacuum or wet-sweep and place into a suitable closable, labelled container for disposal. Wash the area clean with water and detergent, observing environmental requirements.

7. HANDLING AND STORAGE:

USAGE PRECAUTIONS:	The product should be used in accordance with good industrial safety practice and hygiene principles for handling and storing of chemicals. Ensure good ventilation and local exhaust extraction in work place.
STORAGE PRECAUTIONS:	In (original) container securely sealed to avoid dusting.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION:

INGREDIENT COMMENTS:	No specific OES assigned, however for dusts of any kind, ensure LTEL (8-hour TWA ref. period) level does not exceed 10 mg.m3 for total inhalable dust or 4 mg.m3 for respirable dust (or) as recommended in current edition of EH40.
VENTILATION:	Provide adequate general and local exhaust ventilation.
RESPIRATORS:	If unable to control dust emissions below OES limits, an approved dust protection to P2 level of protection is recommended.
PROTECTIVE GLOVES:	Use protective gloves.
EYE PROTECTION:	Use eye protection if eye contact is likely.
OTHER PROTECTION:	Wear personal protective equipment appropriate to the quantity of material handled.
HYGIENIC WORK PRACTICES:	SKIN PROTECTION - apply barrier cream to hands and exposed skin. Regularly vacuum dust to minimise the potential of air-borne exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE:	White crystals.		
pH-VALUE, DILUTED SOLUTION:	~ 7	Concentration % M:	(10% aqueous solution)
SOLUBILITY VALUE (g/100g H2O 20°C):	~ 70%		

10. STABILITY AND REACTIVITY:

STABILITY: Stable under normal conditions of use.
HAZARDOUS DECOMP. PRODUCTS: Oxides of sulphur if heated to dryness.

11. TOXICOLOGICAL INFORMATION:

Toxicological data LDLo. Oral. Human. 482 mg/kg
LD50. Oral. Rat. 5000 mg/kg

INHALATION: High concentration of dust may cause transient irritation to the upper respiratory tract.

INGESTION: May cause gastro-intestinal disturbances, acts as mild laxative. Ingestion of sufficient quantities may lead to heart changes, flaccid paralysis and cyanosis.

SKIN: Repeated or prolonged contact may cause mild irritation and/or drying (defatting) of skin.

EYES: Dust may cause mechanical irritation to eyes.

12. ECOLOGICAL INFORMATION:

ECOLOGICAL INFORMATION: No specific data or information available regarding environmental impact. Regarded as having low toxicity to aquatic organisms.

MOBILITY: Soluble in water.

DEGRADABILITY: Not biodegradable.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHODS: Disposal should be in accordance with the principles of Duty of Care observing local and national regulations.

14. TRANSPORT INFORMATION:

GENERAL: Not classified as hazardous for transport.

15. REGULATORY INFORMATION:

UK REGULATORY REFERENCES: This product is not classed as dangerous substance under the classification, packaging and labelling of dangerous substances regulations.

16. OTHER INFORMATION:

INFORMATION SOURCES:	This product has been classified in accordance with CHIP3 regulations.
REVISION COMMENTS:	Edition 01; Revised item(s):
ISSUED BY:	MK
SDS No.:	285
DATE:	12/07/02
DISCLAIMER:	The foregoing data has been compiled for safety information only and does not form part of any selling specification. Information contained in this Data Sheet is to the best of JMLs knowledge correct at the time of publication. Customers should always satisfy themselves, that the product which they have selected is entirely suitable for their purpose under their conditions of use and in compliance with current regulations. For any further information, please contact the supplier.

Section 1. Identification

Product name : Expo Cleaner - Bottle

Material uses : Cleaning solutions.

Manufacturer : Newell Rubbermaid
3500 Lacey Road, 10th Floor
Downers Grove, IL 60515
USA
800-323-0749 or 630-829-2500

Emergency telephone number (with hours of operation) : CHEMTREC (U.S. and Canada) 1-800-424-9300

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : Not applicable

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
3-butoxypropan-2-ol	0.1 - 2	5131-66-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 3. Composition/information on ingredients

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: 100°C (212°F) [Estimated.]
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Easily soluble in the following materials: cold water and hot water.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- SADT** : Not available.
- Viscosity** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
3-butoxypropan-2-ol	LD50 Dermal	Rabbit	3100 mg/kg	-

Irritation/Corrosion

No known significant effects or critical hazards.

Sensitization

No known significant effects or critical hazards.

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

No known significant effects or critical hazards.

Specific target organ toxicity (repeated exposure)

No known significant effects or critical hazards.

Aspiration hazard

No known significant effects or critical hazards.

Information on the likely routes of exposure : Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Dermal	161551.5 mg/kg

Section 12. Ecological information

Toxicity

No known significant effects or critical hazards.

Persistence and degradability

No known significant effects or critical hazards.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
3-butoxypropan-2-ol	1.2	-	low

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
JN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.

PARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
3-butoxypropan-2-ol	0.1 - 2	Yes.	No.	No.	Yes.	No.

California Prop. 65

This product does not contain Chemicals known to State of California to cause cancer, birth defects, or reproductive harm.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

Canadian lists

Canadian NPRI : The following components are listed: Propylene glycol butyl ether

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 3/26/2015.

Date of previous issue : No previous validation.

Version : 1

Prepared by : Product Safety.

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
UN = United Nations

▼ Indicates information that has changed from previously issued version.

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Enameled copper wire

Magnet Wire



HSM Wire International, Inc

Ph: 330-244-8501 Fax: 330-244-8561

www.hsmwire.com

Material Safety Data Sheet
According to 91 / 155 / EC
Product: Enamelled Copper Wire P155

1. Product Identification

Product Details:	Class F Polyurethane Enamelled Copper Wire
Trade Name:	Polysol 155
Article Number:	01-01-XX
Manufacturer:	Elektrisola Inc. USA 126 High Street Boscawen, New Hampshire 03303
Emergency Number:	603-796-2114 / 603-496-8632

Further Technical Information can be obtained from Elektrisola Product Research & Development Division.
Ph: 603-796-2114 Ext. 328 Fax: 603-796-2112

2. Composition / Data on Components

Hazardous Components

Chemical Name	Formula	Case No.	Composition (wt%)
Copper	CU	7440-50-8	90.60 - 96.69
Polyurethane Resin	(NHCOO) _n	9009-54-5	3.31 - 9.40

3. Hazardous Identification

Hazardous Description:	Material is non-hazardous as shipped.
Route of Entry:	Inhalation, ingestion.
Information Concerning to Man & Environment:	When soldering, welding, hot staking, burning, wire brushing or melting. Potentially toxic fumes or dusts may be generated. Asthmatic disorders may be aggravated by exposure to excessive fumes.
Classification Systems:	The classification was made according to the latest editions of International substances lists, and expanded upon from company data and literature. NFPA / HMIS rating (scale 0-4) Health=2, Fire=1, Reactivity=0.

4. First Aid Measures

General Information:	For irregular breathing or respiratory arrest, provide artificial respiration.
After Inhalation:	For unconsciousness, place patient stably in side position for transportation.
After Skin Contact:	Generally does not cause skin irritation. Wash with soap & water if necessary.
After Eye Contact:	Rinse opened eyes for several minutes under running water.
After Swallowing:	Induce vomiting if conscious. Seek medical attention in all cases.

5. Fire Fighting Measures

Suitable Extinguishing Agents:	Dry powder, alcohol resistant foam, carbon dioxide.
For safety reasons unsuitable extinguishing agents:	Do not use water jet for copper powder fires.
Protective Equipment:	In case of brief exposure or low pollution, use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.
Hazchem Code:	Not applicable.

6. Accidental Release Method

Person-related Safety Precautions:	Not required.
Measure for Environment Protection:	No possibility of leakage and spillage.
Measure for Cleaning / Collection:	Not applicable.

7. Handling and Storage		
Information for Safe Handling:	Particular attention should be paid to the eventual bonding and the soldering processes. Some exhaust of fumes is expected under each processes.	
	When re-reeling from the spool, care should be taken such that the loose end from the spool does not fly out and cause laceration.	
	Onsite job safety assessment should be carried out to determine the safe way to handle reels or packages containing wire.	
Storage		
Requirements to be met by storerooms and receptacles:	No special requirements.	
Information about storage in one common storage facility:	Store in cool, dry, well-vented area. Stay away from storage area under direct sunlight.	
Further information about storage conditions:	None.	
Storage Class		
Class according to regulation on flammable liquids:	Not applicable.	
8. Exposure Controls and Personal Protection Gear		
Additional information about design of technical facilities:	No further data.	
Personal Protective Equipment		
General Hygienic Measures:	Keep away from food stuff and beverages. Wash hands at the end of work.	
Respiratory Protection:	Not normally needed at ambient temperature. Use NIOSH / OSHA certified respirator in confined spaces or if fumes, mist or dust develop from heating.	
Protection of hands:	Protective gloves recommended.	
Eye Protection:	Safety glasses recommended.	
9. Physical and Chemical Properties		
Form:	Solid.	
Color:	According to product specification.	
Odor:	No odor.	
Melting Point:	Cu 1083°C	
Boiling Point:	Cu 2324°C	
Cut-through Temperature:	>200°C (according to IEC 851.6.4 and NEMA MW 1000, 3.50.1.1)	
Ignition Danger:	Not self-igniting, and no explosion hazard.	
Specific Gravity (H ₂ O = 1):	8.21 - 8.81	
Solubility in Water:	0 % (20°C)	
Solubility in reagents:	Copper is soluble in HNO ₃ , not H ₂ SO ₄ , and slightly soluble in HCl, NH ₄ Cl.	
10. Stability and Reactivity:		
Stability and Reactivity:	Stable.	
Hazardous Polymerization:	No dangerous polymerization known.	
Thermal Decomposition:	No decomposition if used according to product specifications.	
Hazardous Decomposition Products:	CO, CO ₂ and isocyanine fractions.	
Conditions to Avoid:	High temperature. At elevated temperature, enamel might burn and emit potentially toxic fumes.	
Materials to Avoid:	Concentrated acids and bases. Bare wire (copper) should not be in contact with acetylene gas. Copper contact with acetylene gas may produce copper acetylide which is shock sensitive. Finely divided copper in contact with finely divided bromates, chlorates, or iodates of barium, calcium, magnesium, potassium, sodium, or zinc will explode under heat, percussion and sometimes light friction. Copper reacts violently with chlorine, chlorine trifluoride, ethylene oxide, fluorine, hydrogen peroxide, hydrazine, munonitrate, hydrogen sulfide, and lead zinc.	
11. Toxicological Information		
Permissible exposure limits	OSHA PEEL	ACID TV
Copper (dust and mist)	8 hr., 1 mg / m ³	8 hr., 1 mg / m ³
Copper (fumes)	8 hr., 0.1 mg / m ³	8 hr., 0.2 mg / m ³
Primary Irritant Effect		
On the Skin:	No irritating effect.	
On the Eye:	No irritating effect.	

Sensitization:	Isocyanine fume is a respiratory sensitizer. TWA 0.02 mg / m3, STEEL 0.07 mg / m3.
Additional Toxicological Information:	When used and handled according to specifications, this product does not have any harmful effects to our experience and information provided to us.
12. Ecological Information	
General Notes:	This product contains the below chemical substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986: Copper CAS No. 7440-50-8 90.60 -96.69 wt. %
13. Disposal Considerations	
Product Details:	
Recommendation:	Dispose of in accordance with all applicable federal, state, and local regulations. Recycle copper wire, or send to suitable landfill.
Disposal Euro code CAR:	17.04.08 Enamelled copper or aluminum wire from demolition or scraps.
	16.02.08 Enamelled copper or aluminum wire from demolition or scraps.
	17.04.01 Copper bare wire from demolition or scraps.
Uncleaned Packaging	
Recommendation:	Dispose of in accordance with all applicable federal, state, and local regulations.
Disposal Euro code CER:	15.01.01 Paper, millboard.
	15.01.02 Plastic.
	15.01.03 Wood.
	15.01.04 Metal.
	15.01.05 Compound Materials.
	15.01.06 Various added Material.
14. Transport Information	
Land transport ADR / RID (cross-border)	
ADR / RID Class	Not applicable.
Maritime Transport IMDG	
IMDG Class:	Not applicable.
Marine Pollutant:	No.
Air Transport ICAO-TI and IATA-DRG	
ICA / IATA Class:	Not applicable.
15. Regulations	
Labeling according to guidelines	
This product contains the below chemical substance subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986:	
Copper	CAS No. 7440-50-8 90.60 - 96.69 wt %
16. Other Information	
This information is presented in good faith and is based on the present knowledge of Elektrisola. However, Elektrisola makes no express or implied warranty to the accuracy of such information, and assumes no liability resulting from the use of or reliance upon such information.	
Copyright 2013 HSM Wire International, Inc. Information is to be used as a guideline only.	

F

Fire extinguisher



SAFETY DATA SHEET

Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)

1. IDENTIFICATION

Product Name	Commercial ABC Dry Chemical (Fire Extinguishing Agent, Pressurized and Non-pressurized)
Other Names	Multi-Purpose, Ammonium Phosphate, Monoammonium Phosphate
Recommended use of the chemical and restrictions on use	
Identified uses	Fire Extinguishing Agent
Restrictions on use	Consult applicable fire protection codes
Company Identification	Kidde Residential & Commercial 1016 Corporate Park Drive Mebane, NC 27302 USA
Customer Information Number	(919) 563-5911 (919) 304-8200
Emergency Telephone Number	
CHEMTREC Number	(800) 424-9300 (703) 527-3887 (International)
Issue Date	April 10, 2015
Supersedes Date	February 9, 2015

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

This SDS covers the product listed above as sold in pressurized and non-pressurized containers. GHS classifications for both forms are listed below.

GHS Classification – Pressurized

Hazard Classification

Gas under pressure – Compressed gas

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Contents under pressure; may explode if heated.



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and Non-pressurized)

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Monoammonium Phosphate	7722-76-1	55 - 65%
Ammonium Sulfate	471-34-1	30 - 40%
Mica	12001-26-2	< 5%
Clay	1332-58-7	< 5%
Amorphous Silica	7631-86-9	< 5%
Dye	NA	<1%

Note: Pressurized product uses nitrogen or compressed air as the expellant.

4. FIRST-AID MEASURES

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Ingestion

Dilute by drinking large quantities of water and obtain medical attention.

Inhalation

Move victim to fresh air. Obtain medical attention immediately for any breathing difficulty.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable Extinguishing Media

This preparation is used as an extinguishing agent and therefore is not a problem when trying to control a fire. Use extinguishing agent appropriate to other materials involved. Keep pressurized containers and surroundings cool with water spray as they may rupture or burst in the heat of a fire.

Specific hazards arising from the chemical

Pressurized containers may explode in heat of fire.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and
Non-pressurized)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

Environmental Precautions

Prevent large quantities of the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Sweep up or vacuum and transfer into suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing. Prevent skin and eye contact.

Conditions for safe storage

Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Mica

ACGIH TLV: 3 mg/m³ TWA, measured as respirable fraction of the aerosol.

OSHA PEL: 20 mppcf, <1% crystalline silica

Clay as Kaolin, Respirable Fraction

ACGIH TLV: 2 mg/m³ TWA

OSHA PEL: 15 mg/m³ TWA, total dust

5 mg/m³ TWA, respirable fraction

Nuisance Dust Limit

OSHA PEL: 50 mppcf or 15 mg/m³ TWA, total dust

15 mppcf or 5 mg/m³ TWA, respirable fraction

Appropriate engineering controls

Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.

Individual protection measures

Respiratory Protection

Not normally required. Use dust mask where dustiness is prevalent, or TLV is exceeded. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and
Non-pressurized)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Skin Protection

Gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Non- Pressurized

Appearance

	Physical State	Solid (powder)
	Color	Pale Yellow
Odor		Odorless
Odor Threshold		No data available
pH		Not applicable
Specific Gravity		No data available
Boiling Range/Point (°C/F)		Not applicable
Melting Point (°C/F)		No data available
Flash Point (PMCC) (°C/F)		Not flammable
Vapor Pressure		No data available
Evaporation Rate (BuAc=1)		No data available
Solubility in Water		No data available
Vapor Density (Air = 1)		Not applicable
VOC (g/l)		None
VOC (%)		None
Partition coefficient (n-octanol/water)		No data available
Viscosity		No data available
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available
Upper explosive limit		No data available
Lower explosive limit		No data available
Flammability (solid, gas)		No data available

Expellant - Nitrogen

Appearance

	Physical State	Compressed gas
	Color	Colorless
Odor		None
Odor Threshold		No data available
pH		Not applicable
Specific Gravity		0.075 lb/ft ³ @70°F as vapor
Boiling Range/Point (°C/F)		-196°C/-321 °F
Melting Point (°C/F)		No data available
Flash Point (PMCC) (°C/F)		Not flammable
Vapor Pressure		No data available
Evaporation Rate (BuAc=1)		No data available
Solubility in Water		No data available



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and Non-pressurized)

11. TOXICOLOGICAL INFORMATION

Reproductive Toxicity

Monoammonium Phosphate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.

Ammonium Sulfate: Available data indicates this component is not expected to cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Monoammonium Phosphate:

LC50 rainbow trout >100 mg/l 96h

LC50 water flea 1790 mg/l 72h (similar substance)

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of container in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment. Specific volumes, pressures or hardware configurations containing such materials can dictate various different hazard classifications for transportation and labelling requirements. Under Federal Regulations only trained and qualified individuals are permitted to label and ship products following the applicable Department of Transportation (DOT), Federal Aviation Administration (FAA), Transport Canada (TC), International Maritime Dangerous Goods (IMDG) or International Air Transport Association (IATA) requirements.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and Non-pressurized)

15. REGULATORY INFORMATION

Canada DSL Inventory

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

SARA Title III Sect. 311/312 Categorization: Pressurized

Pressure hazard

SARA Title III Sect. 311/312 Categorization: Non-pressurized

None

SARA Title III Sect. 313

This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 1

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 1

HMIS Code for Flammability - 0

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS#: Chemical Abstracts Service Number

EC50: Effect Concentration 50%

IARC: International Agency for Research on Cancer

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Revision Date: April 10, 2015

Replaces: February 9, 2015

Changes made: Updated to GHS Classification.

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.



SAFETY DATA SHEET
Commercial ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and
Non-pressurized)

16. OTHER INFORMATION

Prepared By: EnviroNet LLC.

The information and recommendations presented in this SDS are based on sources believed to be accurate. Kidde Residential & Commercial assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make **NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED**, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 363.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Gelatin

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Gelatin	9000-70-8	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Moisture sensitive. Store tightly closed in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Light amber granules. Faint, sour, animal-like odor.
Soluble: Hot water. Insoluble in most organic solvents.

Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Stable nonhazardous substance.
Shelf life: Indefinite, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Shelf life:

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

Elmer's Glue-All MAX

Synonyms

E9406, E9415, E9416; E9411; E9428; P9418; E39418; E69406.

Chemical Family

Adhesive

Product Use

Adhesive

Manufacturer Information

Elmer's Products, Inc
460 Polaris Parkway, Suite 500
Westerville, OH 43082
USA
Phone:1-888-435-6377
Fax:1-800-741-6046
Email:comments@elmers.com

Emergency Phone Number:
Poison Control Center
1-888-516-2502

For additional product information, access our website at www.elmers.com. To place an order, call 1-800-848-9400.

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity - Inhalation - Dust/Mist - Category 4

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Respiratory Sensitization - Category 1A

Skin Sensitization - Category 1A

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (respiratory system)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 (Organs affected)



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

GHS Label Elements

Symbol(s)



Signal Word

Danger

Hazard Statement(s)

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

May cause allergic or asthmatic symptoms or breathing difficulties if inhaled

May cause allergic skin reaction

May cause respiratory irritation

Causes damage to organs through prolonged or repeated exposure

May cause damage to organs through prolonged or repeated exposure

Precautionary Statement(s)

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray

Wash thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

Wear respiratory protection

Response

IF ON SKIN: Wash with plenty of soap and water

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Call a POISON CENTER or doctor if you feel unwell

Get medical advice/attention if you feel unwell

Specific treatment (see label)

If skin irritation or rash occurs: Get medical advice/attention

If eye irritation persists: Get medical advice/attention

If experiencing respiratory symptoms: Call a POISON CENTER/doctor

Take off contaminated clothing and wash before reuse

Storage

Store in a well-ventilated place. Keep container tightly closed

Store locked up



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
9016-87-9	Isocyanic acid, polymethylenepolyphenylene ester	30-50
101-68-8	4,4'-Methylenediphenyl diisocyanate	30-50
108-90-7	Chlorobenzene	<0.01

Section 4 - FIRST AID MEASURES

Description of Necessary Measures

Get medical advice/attention if you feel unwell.

Inhalation

Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Skin

Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

Eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse mouth thoroughly with water.

Most Important Symptoms/Effects

Acute

May cause respiratory irritation, skin irritation, eye irritation. Harmful if inhaled. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.

Delayed

respiratory system damage. May cause damage to organs through prolonged or repeated exposure.



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Dry chemical, foam or carbon dioxide.

Unsuitable Extinguishing Media

Do not use water.

Special Hazards Arising from the Chemical

Wear self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products

cyanides, oxides of carbon, oxides of nitrogen.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid contact with skin and eyes. Ventilate affected area. Wear personal protective clothing and equipment, see Section 8.

Methods and Materials for Containment and Cleaning Up

Ventilate the area. Eliminate all ignition sources if safe to do so. Large spills: Dike for later disposal. Prevent entry into waterways, sewers, basements, or confined areas. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

Environmental Precautions

Prevent entry into waterways, sewers, basements, or confined areas.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use only with adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid prolonged exposure. Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed
Store locked up



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Avoid contact with water or moisture. Store between 16 C and 35 C. A hazardous build-up of pressure could result due to a reaction with water producing carbon dioxide gas if contaminated containers are resealed. Do not reseal contaminated containers. Reseal uncontaminated containers that are free of moisture only after placing under a nitrogen blanket. Do not store in containers made of copper, copper alloys, or galvanized surfaces. See original container for storage recommendations. Keep separated from incompatible substances.

Incompatible Materials

Amines, alcohol, bases, acids, oxidizing materials, metals, metal salts.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

4,4'-Methylenediphenyl diisocyanate	101-68-8
ACGIH:	0.005 ppm TWA
NIOSH:	0.005 ppmTWA; 0.05 mg/m ³ TWA
	0.02 ppm Ceiling 10 min; 0.2 mg/m ³ Ceiling 10 min
	75 mg/m ³ IDLH
OSHA (US):	0.02 ppmCeiling; 0.2 mg/m ³ Ceiling
Mexico:	0.02 ppmTWA LMPE-PPT; 0.2 mg/m ³ TWA LMPE-PPT; 0.005 ppmTWA LMPE-PPT as Methylene bisphenyl isocyanate; 0.051 mg/m ³ TWA LMPE-PPT as Methylene bisphenyl isocyanate (related to Benzene, 1,1'-methylenebis[isocyanato-)
Chlorobenzene	108-90-7
ACGIH:	10 ppm TWA
NIOSH:	1000 ppmIDLH
Europe:	47 mg/m ³ TWA; 10 ppm TWA
	5 ppmTWA; 23 mg/m ³ TWA
	94 mg/m ³ STEL; 20 ppm STEL
	15 ppm STEL; 70 mg/m ³ STEL
OSHA (US):	75 ppmTWA; 350 mg/m ³ TWA
Mexico:	75 ppmTWA LMPE-PPT; 350 mg/m ³ TWA LMPE-PPT



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

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Biological limit value

There are no biological limit values for any of this product's components.

Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin Protection

Wear appropriate chemical resistant clothing.

Respiratory Protection

A NIOSH approved respirator with a dust, mist, and fume filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits or when symptoms have been observed that are indicative of overexposure.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown liquid	Physical State	Not available
Odor	musty odor	Color	brown
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	>300 °C (decomposes)
Freezing point	Not available	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	>110 °C (230 °F)
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	4E-06 mmHg
Vapor Density (air=1)	8.5	Specific Gravity (water=1)	1.12 [@ 20 °C]
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	2311 cP	Solubility (Other)	reacts, immiscible
Density	Not available	VOC	12 g/L



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Section 10 - STABILITY AND REACTIVITY

Reactivity

May react on contact with water.

Chemical Stability

May react on contact with water.

Possibility of Hazardous Reactions

Polymerization may occur in the presence of metal compounds, alkalies, and tertiary amines at elevated temperatures.

Conditions to Avoid

Avoid flames, sparks, and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

Amines, alcohols, bases, acids, metal salts, metals, oxidizing materials.

Hazardous decomposition products

Water or Moisture: oxides of carbon.

Thermal decomposition products

carbon monoxide, organic compounds, hydrogen cyanide

Section 11 - TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Harmful if inhaled.

Skin Contact

Causes skin irritation. May cause allergic skin reaction.

Eye Contact

Causes serious eye irritation.

Ingestion

May cause gastrointestinal irritation and nausea.

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)

Inhalation LC50Rat 490 mg/m³ 4 h

4,4'-Methylenediphenyl diisocyanate (101-68-8)

Oral LD50Rat 31600 mg/kg



Safety Data Sheet

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Dermal LD50Rabbit >6200 mg/kg (related to Benzene, 1,1'-methylenebis[isocyanato-])
Inhalation LC50Rat 369 mg/m³ 4 h
Chlorobenzene (108-90-7)
Oral LD50Rat 2914 mg/kg
Inhalation LC50Rat 13.5 mg/L 7 h

Immediate Effects

May cause respiratory irritation, skin irritation, eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Harmful if inhaled.

Delayed Effects

May cause respiratory system damage. May cause damage to organs through prolonged or repeated exposure.

Irritation/Corrosivity Data

skin irritation, eye irritation, respiratory tract irritation

Respiratory Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Dermal Sensitization

May cause allergic skin reaction.

Component Carcinogenicity

Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9
IARC:	Supplement 7 [1987]; Monograph 19 [1979](Group 3 (not classifiable))
DFG:	Category 4 (no significant contribution to human cancer)
4,4'-Methylenediphenyl diisocyanate	101-68-8
IARC:	Monograph 71 [1999]; Supplement 7 [1987]; Monograph 19 [1979](Group 3 (not classifiable))
DFG:	Category 4 (no significant contribution to human cancer)
Chlorobenzene	108-90-7
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Germ Cell Mutagenicity

No information available for the product.

Reproductive Toxicity

No information available for the product.

Specific Target Organ Toxicity - Single Exposure

respiratory tract



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Specific Target Organ Toxicity - Repeated Exposure
respiratory system

Aspiration hazard
No information available for the product.

Medical Conditions Aggravated by Exposure
No data available.

Section 12 - ECOLOGICAL INFORMATION

Component Analysis - Aquatic Toxicity

Chlorobenzene	108-90-7
Fish:	LC50 96 h Pimephales promelas 7 - 8.5 mg/L [flow-through]; LC50 96 h Pimephales promelas 4.5 mg/L [static]; LC50 96 h Lepomis macrochirus 6.9 - 7.9 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 4.1 - 4.9 mg/L [static]; LC50 96 h Oncorhynchus mykiss 4.1 - 5.3 mg/L [flow-through]; LC50 96 h Brachydanio rerio 91 mg/L [static]; LC50 96 h Poecilia reticulata 36.35 - 58.19 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata 2.55 - 420 mg/L EPA; EC50 96 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 0.59 mg/L IUCLID

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose in accordance with all applicable regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:
UN/NA #: Not Regulated

TDG Information:
UN#: Not Regulated

IATA Information:
UN#: Not Regulated



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9
SARA 313:	1 % de minimis concentration
4,4'-Methylenediphenyl diisocyanate	101-68-8
SARA 313:	1 % de minimis concentration
CERCLA:	5000 lbfinal RQ; 2270 kgfinal RQ
Chlorobenzene	108-90-7
SARA 313:	1 % de minimis concentration
CERCLA:	100 lbfinal RQ; 45.4 kgfinal RQ

SARA Section 311/312 (40 CFR 370 Subparts B and C)

Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactivity: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Isocyanic acid, polymethylenepolyphenylene ester	9016-87-9	No	No	No	Yes	No
4,4'-Methylenediphenyl diisocyanate	101-68-8	Yes	Yes	Yes	Yes	Yes
Chlorobenzene	108-90-7	Yes	Yes	Yes	Yes	Yes

Not listed under California Proposition 65

Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

4,4'-Methylenediphenyl diisocyanate	101-68-8
	0.1 %



Safety Data Sheet

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Chlorobenzene	108-90-7
	1 %

Component Analysis - Inventory

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

4,4'-Methylenediphenyl diisocyanate (101-68-8)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Chlorobenzene (108-90-7)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

HMIS Rating

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

Summary of Changes

Update: 1/7/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace;



Safety Data Sheet

Material Name: Elmer's Glue-All MAX

SDS ID: SDS-33

MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information

Reasonable care has been taken in the preparation of this information; however, the manufacturer makes no warranty whatsoever including the warranty of merchantability, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental, consequential, or other such damages resulting from its use or misuse.

Disclaimer:

Supplier gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser shall determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

**GOO
GONE.**

Product: Spray Gel- 2081, 2096

Revision Date: 19-May-2014

SECTION 1 – IDENTIFICATION

Product Identifier

Product Name: Spray Gel

Product Code: 2081, 2096

Recommended Use of the Chemical and Restrictions for Use

Recommended Use: Cleaner

Restrictions for Use: Use only as directed.

Details of the Supplier

Manufacturer: Goo Gone
755 Tri-State Parkway
Gurnee, IL 60031
855-364-8135

Emergency Phone Number

24-Hour Number: 1-800-535-5053

International: 1-352-323-3500

SECTION 2 – HAZARDS IDENTIFICATION

Classification

Hazard Class	Category
Flammable Liquid	4
Skin Sensitization	1
Aspiration Hazard	1

Label Elements

Hazard Symbols(s):



Signal Word(s): Danger

Hazard Statement(s): Combustible liquid. May cause an allergic skin reaction. May be fatal if swallowed and enters airways.

Precautionary Statement(s): Keep away from flames and hot surfaces. No smoking. Avoid breathing fume/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. Store in a well-ventilated place. Keep cool. Store locked up. Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other Hazards

2% of the mixture consists of ingredient(s) of unknown acute toxicity.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Wt %
Petroleum distillates, hydrotreated light	64742-47-8	60-100
D-Limonene	5989-27-5	1-5
Orange, sweet, extract	8028-48-6	0.5-5

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

GOO GONE.

Product: Spray Gel- 2081, 2096

Revision Date: 19-May-2014

SECTION 4 – FIRST AID MEASURES

First Aid Measures

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Eye Contact: In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, seek medical attention immediately.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash with soap and water. If irritation persists, seek medical attention.

Most Important Symptoms and Effects (Acute and Delayed)

Inhalation: May cause respiratory track irritation.

Eye Contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Ingestion: May be fatal if swallowed and enters airways. This product may be aspirated into the lungs and cause chemical pneumonitis. May cause stomach distress, nausea or vomiting.

Skin: May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause sensitization by skin contact.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physician: Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media

Suitable: Treat for surrounding material.

Unsuitable: None known.

Specific Hazards Arising from Chemical

Products of combustion include but are not limited to: oxides of carbon. Combustible liquid.

Protective Equipment and Precautions for Firefighters

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Personal Precautions: Use personal protective equipment as required.

Environmental Precautions: See Section 12 for ecological information.

Methods and Material for Containment and Cleaning Up

Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). For cleaning up scoop up material and place in a disposal container. Provide ventilation.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling

Handling: Keep away from sources of ignition. - No smoking. Avoid contact with skin and eyes. Avoid breathing in vapor or mist. Do not swallow. Handle and open container with care. Wash hands after use. Do not eat, drink, or smoke when using this product.

General Hygiene Advice: Launder contaminated clothing before use. Wash hands before eating, drinking, or smoking.

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

GOO GONE.

Revision Date: 19-May-2014

Product: Spray Gel- 2081, 2096

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Keep cool.

Incompatible Materials: Oxidizers

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Petroleum distillates, hydrotreated light (64742-47-8)	200 mg/m ³	100 ppm	Not available
D-Limonene (5989-27-5)	Not available	Not available	Not available
Orange, sweet, extract (8028-48-6)	Not available	Not available	Not available

Appropriate Engineering Controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Individual Protection Measures

Respiratory Protection: None required for normal use. In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin and Body Protection: Wear suitable protective clothing.

Eye/Face Protection: Safety glasses or goggles are recommended when using product.

General Work/Hygienic Practices: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Orange gel

Odor: Citrus

Odor threshold: Not determined

pH: Not determined

Melting point/freezing point: Not determined

Initial boiling point and boiling range: Not determined

Flash point: 85°C (185°F) TCC

Evaporation rate: Not determined

Flammability (solid, gas): Flammable

Upper/lower flammability or explosive limits: Not determined

Vapor pressure: Not determined

Vapor density: Not determined

Relative density: 0.81

Solubility(ies): Not determined

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: Not determined

Decomposition temperature: Not determined

Viscosity: 10-50 cP @ 20°C (68°F)

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

GOO GONE.

Revision Date: 19-May-2014

Product: Spray Gel- 2081, 2096

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: None under normal use.

Conditions to avoid: Heat. Incompatible materials. Sources of ignition.

Incompatible materials: Oxidizers

Hazardous decomposition products: May include and are not limited to: oxides of carbon.

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Likely Routes of Exposure: Inhalation, skin contact, eye contact, ingestion

Information Related to Physical, Chemical, and Toxicological Effects

See section 4 of this SDS.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity: NTP: No IARC: No OSHA: No

Numerical Measures of Toxicity

Product	
ATE (oral)	>2000 mg/kg, rat
ATE (dermal)	>2000 mg/kg, rabbit
ATE (inhalation)	Not available

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated light (64742-47-8)	>5000 mg/kg, rat	>2000 mg/kg, rabbit	>5.2 mg/l/4h, rat
D-Limonene (5989-27-5)	4400 mg/kg, rat	>5000 mg/kg, rabbit	Not available
Orange, sweet, extract (8028-48-6)	>5000 mg/kg, rat	>5000 mg/kg, rabbit	Not available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: Not established

Persistence and degradability: Not established

Bioaccumulative potential: Not established

Mobility in soil: No additional information available

Other adverse effects: No additional information available.

SECTION 13 – DISPOSAL CONSIDERATIONS

See section 8 of this SDS for exposure controls and personal protection.

Dispose of the product and container in accordance with all applicable local, state, and federal regulations.

SECTION 14 – TRANSPORT INFORMATION

Note: Classification changes based on quantity, packaging, and method of shipment. See current shipping paper for most up to date shipping information.

DOT (Ground): Not Regulated- See 49 CFR 173.150(f)(2) as the product is not bulk packaged.

IATA (Air): Not Regulated

IMDG (Vessel): Not Regulated

SECTION 15 – REGULATORY INFORMATION

All ingredients in this product are listed or are excluded from listing on the US Toxic Substances Act (TSCA) Chemical Substance Inventory.

SAFETY DATA SHEET

Confirms to OSHA Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012

**GOO
GONE.**

Product: Spray Gel- 2081, 2096

Revision Date: 19-May-2014

SECTION 16 – OTHER INFORMATION

Issue Date: 19-May-2014

Revision Date: 19-May-2014

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designed and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Safety Data Sheet

Date of issue: 2014-11-19

Revision Date: -

1. Identification of the mixture and of the company

Product name : Mechanical pencil lead (HB)
 Company : ZEBRA CO., LTD.
 2-9 Higashi-gokencho Shinjuku-ku Tokyo JAPAN

TEL: +81-3-3268-1193
 FAX: +81-3-3268-1197
 Emergency telephone : +81-3-3268-1193
 This phone number is available only during office hours: 9 a.m. to half past 5 p.m.
 (Japan time)

Product use : Lead for writing implement

2. Hazards identification

GHS classification

Physical hazards

Self-heating mixtures : Not classified
 Corrosive to metals : Not classified

Health hazards

Acute toxicity-Oral : Not classified
 Acute toxicity-Dermal : Not classified
 Acute toxicity-Inhalation: vapour : Classification not possible
 Acute toxicity-Inhalation: mist : Classification not possible
 Skin corrosion / irritation : Classification not possible
 Serious eye damage / eye irritation : Classification not possible
 Respiratory or skin sensitization : Classification not possible / Classification not possible
 Germ cell mutagenicity : Classification not possible
 Carcinogenicity : Classification not possible
 Reproductive toxicity : Classification not possible
 Specific target organ toxicity (Single exposure) : Classification not possible
 Specific target organ toxicity (Repeated exposure) : Classification not possible
 Aspiration hazard : Classification not possible

GHS label elements

Pictograms or Symbol

No pictogram

Signal Word

No signal word

Hazard statement

No hazard statement

Precautionary Statements

Prevention

Nothing in particular

Response

Nothing in particular

Storage

- Store in a well ventilated place. Keep cool and container tightly closed.

Disposal

- Dispose of contents/container to in accordance with local government regulation.

3. Composition/information on ingredients**Mixture****Component and Amount**

Component	Amount	CAS No.	Reference Number in Gazetted List in Japan (Japanese Chemical Substances Control Act)
Graphite	50-80%	7782-42-5	Not subject to the regulation
Carbon	10-30%	7440-44-0	Not subject to the regulation
Additives	10-30%	Nondisclosure	Nondisclosure(registered)

4. First-aid measures**After inhalation:**

- Call a doctor/physician if you feel unwell.
- Remove victim to fresh air and keep at rest in a position comfortable for breathing.

After skin contact:

- Call a doctor/physician if you feel unwell.
- If skin irritation occurs: Get medical advice/attention

After eye contact:

- IF IN EYES: Rinse continuously with water for several minutes.
- Remove contact lenses if present and easy to do . Continue rinsing
- If eye irritation persists : Get medical advice/attention

After ingestion:

- Call a doctor/physician if you feel unwell.

Protection of the person who takes first aid

- Nothing in particular.

5. Fire-fighting measures**Suitable Extinguishing media**

- Carbon dioxide, dry chemical powder, water fog, foam

Prohibition extinguishing media for safety reason

- Water spray (straight)

Specific hazards

- This product is not combustible. But evaporated residue is combustible.
- May produce toxic fumes if burning.

Specific fire fighting procedures

- If safe to do so, move undamaged containers from the fire area.
- If can't move the container , cool containers and surrounding with spray water.
- Cool containers with large quantities of water until well after extinguished the fire.

Special protective equipment for fire-fighters

- Fire-fighting should be performed from the windward side.
- Respiratory protection, and other suitable protective equipment

6. Accidental release measures

Personal precautions

The pollution area should be established as off limits without concerned persons.

Protective equipment and emergency measure

Do not touch the leakage or its damaged container without suitable protection.

Do not walk through the leakage.

Keep sufficient ventilation if the area is indoor.

Remove ignition sources.

Environmental precautions

Keep away from drains, and prevent from releasing to the environment.

Methods for cleaning up

Use non-flammable absorbent materials, and put them in airtight container.

Dispose of absorbent in accordance with law.

Prevention of secondary disaster

Remove nearby ignition source and hot surface.

7. Handling and storage

Handling

Technical measures

Do suitable equipment measures and use suitable protection that refer to "8. Exposure control/ personal protection".

Local exhaust ventilation and general ventilation

Use local exhaust ventilation and general ventilation that refer to "8. Exposure control/ personal protection".

Caution

When handling do not use high temperature articles, spark and fire.

Handle container with care, do not make it turn over, drop, give impact and drag.

Do not breathe, contact and swallow.

Maintain air concentrations below exposure limit using exhaust ventilation.

Do not eat, drink or smoke when using this product.

Wash hand thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Avoid contact

Refer to section 10 about stability and reactivity.

Storage

Incompatible materials

Refer to section 10 about stability and reactivity.

Storage condition

Store away from heat/sparks/open flames – No smoking

Store in a well ventilated place. Keep cool and container tightly closed.

Store locked up.

The Containers

Use the container that our company filled up when ship products

8. Exposure control/ personal protection**Exposure limit values**

Chemical name	Permissible concentration		Administrative levels
		The Japan Society for Occupational Health	ACGIH TLV-TWA
Nothing in particular			

Equipment measures

- Put up local exhaust ventilation. Use explosion-proof electrical/ventilating/lighting.
- Take precautionary measures against static discharge.
- Put up emergency eyewash and shower in case of storage or handling about this product.

Protection**Respiratory protection**

- If necessary use suitable respiratory protection.

Hand protection

- Use suitable protective gloves.

Eye protection

- Use suitable eye protection.

Skin/body protection

- If necessary use suitable face protection.

Hygiene measures

- Do not eat, drink or smoke when using this product.
- Wash thoroughly after handling.

9. Physical and chemical properties

Appearance	Black Solid
Odour	No data available
pH	No data available
Melting point / Coagulating point	No data available
Boiling point	No data available
Flash point	No data available
Explosive limit UEL	No data available
Explosive limit LEL	No data available
Vapour pressure	No data available
Vapour density	No data available
Specific gravity	No data available
Water solubility	No data available
Partition coefficient n-octanol/water	No data available
Ignition point	No data available
Decomposition point	No data available

10. Stability and reactivity

Chemical stability	This product is stable in normal condition.
Materials to Avoid	No data available
Conditions to avoid	No data available
Incompatible materials	No data available
Hazardous decomposition products	No data available

11. Toxicological information

Acute toxicity–Oral	Not classified
Acute toxicity–Dermal	Not classified
Acute toxicity–Inhalation: vapour	Classification not possible
Acute toxicity–Inhalation: mist	Classification not possible
Skin corrosion / irritation	Classification not possible
Serious eye damage / eye irritation	Classification not possible
Respiratory or skin sensitization	Classification not possible / Classification not possible
Germ cell mutagenicity	Classification not possible
Carcinogenicity	Classification not possible
Reproductive toxicity	Classification not possible
Specific target organ toxicity(Singel exposure)	Classification not possible
Specific target organ toxicity(Repeated exposure)	Classification not possible
Aspiration hazard	Classification not possible

12. Ecological information

Hazardous to the aquatic environment(acute)	Not classified
Hazardous to the aquatic environment(chronic)	Not classified
Degradability	No data is available
Bioaccumulative potential	No data is available
Mobility in soil	No data is available

13. Disposal considerations**Waste residues**

Disposal must be made according to official regulations.
Avoid release to the environment.

Contaminated container and packaging

Do not flush into the sewer.
Remove all contents when you dispose of empty containers.

14. Transport information

The contents are as follows when transport only ink

International regulation**IMDG (maritime transport)**

UN No.	Not applicable
Class	–
Packing Group	–
Marine Pollutant	–

ICAO/IATA (air transport)

UN No.	Not applicable
Class	–
Packing Group	–

Special precautions

Prevent from falling, stumbling and doing damage when the container loading.
Avoid acute vibration and friction for container.

If there are some indications of hazard in transporting like acute leak in transporting,
take emergency measures and report the accident at once to disaster management agency.
Avoid transport with foods or feeds.

Above regulations are applied to transport of writing instruments filled with the Lead.

15. Regulatory information(Japan)

Follow all regulation in your country.

16. Other information

In this sheet, the contents of ingredients and the value of physical and chemical properties are not guaranteed performance.

The information contained in this sheet is based on the data available at now.

But this shall not constitute a guarantee for any specific or classification.

Please be alert to handling this product because chemicals shall have unknown hazards.

This sheet may be revised when we get new information.

The information is assumed in the case of large-scale handling on business operations.

They cannot be always applicable to general use of writing instruments.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS) second revised edition 2007
Recommendation of Occupational Exposure Limits(2009-2010) by The Japan Society for Occupational Health
2009 TLVs and BEIs by ACGIH

SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

- ITEM NUMBER(S): 170401, 170455
- PRODUCT NAME: **710 Multi-Purpose Disinfectant Cleaner**
 - 3 L 170401
 - 55 GL: 170455

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE

- RECOMMENDED USE: Disinfection of surfaces, equipment.
- IDENTIFIED USERS: For sale to, use and storage by service persons only.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/
SUPPLIER: **Waxie's Enterprises, Inc.**
- ADDRESS: 9353 Waxie Way, San Diego, CA 92123-1036
- BUSINESS PHONE: 1-800-995-4466
- EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL; 24 hours)

1.4 OTHER PERTINENT INFORMATION

- This product is intended to be used only after dilution. The relevant hazard and safety data are specified for both the **Product as SOLD** and **Product at USE DILUTION**, where appropriate.
- EPA registration # 1839-167-14994.

SECTION 2: HAZARD IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
OSHA/HCS Status		
Classification of the Substance or Mixture	Flammable Liquids (Category 3). Acute Toxicity, Oral (Category 4), Skin corrosion/Irritation (Category 2); Serious eye damage/Irritation (Category 2A); Acute aquatic toxicity (Category 2)	Acute Toxicity (Oral, Category 5) Eye Damage/Irritation (Category 2B)

2.2 LABEL ELEMENTS:

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
ELEMENT		
Hazard Pictograms		Not applicable.
Signal Word	WARNING.	WARNING.
Hazard Statements	Flammable liquid and vapor. Harmful if swallowed. Causes skin and serious eye irritation. Toxic to aquatic life.	May be harmful if swallowed. Causes eye irritation.

SECTION 2: HAZARDS IDENTIFICATION (Continued)

2.2 LABEL ELEMENTS (Continued):

ELEMENT

Precautionary Statements
Prevention

Product as SOLD

Keep out of reach of children. Keep away from heat, sparks, open flames, hot surfaces – No smoking. Keep container tightly closed. Use only non-sparking tools. Wash hands thoroughly after use. Do not eat, drink, or smoke when using this product. Wear eye protection/face protection/protective clothing/protective gloves. Avoid release into the environment. Collect spillage.

Response

IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician. IF ON SKIN (or hair): Wash with plenty of water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse. IN CASE OF FIRE: Use Class B fire extinguisher.

Storage

Store in well-ventilated place. Keep cool.

Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

Product at USE DILUTION

Keep out of reach of children. Wash hands thoroughly after handling.

Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician.

Not established; follow guidelines in section 7.

Not established; follow guidelines in section 13.

2.3 OTHER PERTINENT DATA ON CHEMICAL AND PHYSICAL HAZARDS:

- May cause severe irritation of the respiratory tract if mists/sprays are inhaled. Ingestion of large quantities may cause irritation, ulceration, nausea.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 SUBSTANCES/MIXTURES

CHEMICAL	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR CHEMICAL	% (w/w)
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	Acute toxicity, Oral (Category 4); Skin corrosion (Category 1B); Serious eye damage (Category 1)	Proprietary ¹
Octyl decyl dimethyl ammonium chloride.	68424-95-3	Acute toxicity, Oral (Category 4); Skin corrosion (Category 1B); Serious eye damage (Category 1)	Proprietary
1-Octanaminium, N,N-Dimethyl-N-octyl-, chloride	5538-94-3	Acute toxicity, Oral (Category 4); Skin corrosion (Category 1B)	Proprietary
1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	7173-51-5	Acute toxicity, Oral (Category 3); Skin corrosion (Category 1B); Serious eye damage (Category 1); Acute aquatic toxicity (Category 1); Chronic aquatic toxicity (Category 2)	Proprietary
Ethanol	64-17-5	Flammable liquids (Category 2); Acute toxicity, Oral (Category 4); Specific target organ toxicity - single exposure (Category 1); Acute aquatic toxicity (Category 2); Chronic aquatic toxicity (Category 2)	Proprietary
Water and other components less than 1% in concentration within this solution. The remaining components of this product are not classified as hazardous in their existing concentrations			Balance

¹ The exact percentage of composition has been withheld as a trade secret. All relevant physical and health hazards have been declared, in accordance with regulatory requirements.

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

AREA EXPOSED

Eye Contact

Product as SOLD

Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Seek medical attention if irritation persists.

Product at USE DILUTION

Flush with copious amounts of water. "Roll" eyes during flush. Seek medical attention if irritation persists.

Skin Contact

Flush area with warm, running water for several minutes. Seek medical attention if irritation persists.

Flush area with warm, running water for several minutes.

Inhalation

Obtain fresh air.

Obtain fresh air.

Ingestion

If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

4.2 MOST IMPORTANT ACUTE AND CHRONIC EXPOSURE SYMPTOMS

• ACUTE HEALTH EFFECTS:

AREA EXPOSED

Eye Contact

Product as SOLD

Causes serious eye irritation.

Product at USE DILUTION

Causes eye irritation, depending on the duration of contact, redness and pain may occur.

Skin Contact

Causes moderate to serious skin irritation, depending on duration of contact

No adverse effects anticipated.

Inhalation

Causes respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.

May cause mild respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.

Ingestion

Causes gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting if large volumes are ingested.

May cause gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting.

• CHRONIC HEALTH EFFECTS:

Product as SOLD

None reported.

Product at USE DILUTION

None reported.

• TARGET ORGANS:

Product as SOLD

Skin, eyes.

Product at USE DILUTION

None reported.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

The following information is for both **Product AS SOLD** and **Product at USE DILUTION**.

- **GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.
- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None reported.

SECTION 5: FIREFIGHTING MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Water Jet, Dry Powder, Foam, Carbon Dioxide, Halon, or any other.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

SECTION 5: FIREFIGHTING MEASURES (Continued)

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

• NFPA FLAMMABILITY CLASSIFICATION:

Classification
NFPA Rating

Product as SOLD



NFPA Classification

Class II Combustible Liquid.

Product at USE DILUTION



Not flammable.

• UNUSUAL HAZARDS IN FIRE SITUATIONS:

Decomposition

Product as SOLD

Generates carbon dioxide, carbon monoxide, hydrogen chloride, ammonia, and nitrogen oxides.

Product at USE DILUTION

Generates carbon dioxide, carbon monoxide, hydrogen chloride, ammonia, and nitrogen oxides.

Explosion Sensitivity to
Mechanical Impact

Not applicable.

Not applicable.

Explosion Sensitivity to
Static Discharge

Not applicable.

Not applicable.

5.3 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool. Because this is product is a cleaning agent, any equipment that comes in contact with this solution can be rinsed thoroughly with water and then returned to service.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material (therefore, 12 gallons or less). Subsequently, personnel can follow the instructions for incidental releases. As needed, respond to non-incident chemical releases of this product (such as the simultaneous destruction of several pallets of this product) by clearing the impacted area and contacting appropriate emergency personnel. In the event that over 5 gallons of this material has spilled, safety goggles with face-shield and air-purifying respirator with High Efficiency Particulate Filter should be worn.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse area thoroughly. Because this product is a disinfectant, all items that come in contact with the solution can be returned to service after rinsing.

6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of product (more than 4 gallons) into the environment. Avoid accidental dispersal of spilled material into soil, waterways and sewers.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material.

6.4 REFERENCES TO OTHER SECTIONS

- **SECTION 8:** For exposure levels and detailed personal protective equipment recommendations.
- **SECTION 13:** For waste handling guidelines.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hygiene Practices	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
Handling Practices	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use. Avoid conditions that create static electrical discharge.	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Storage Practices	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals.
Incompatibilities	See Section 10 (Stability and Reactivity).	See Section 10 (Stability and Reactivity).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

- **AIRBORNE EXPOSURE LIMITS:**

COMPONENT	ACGIH TLV	OSHA PEL (ppm)	NIOSH REL (ppm)	OTHER
Ethyl Alcohol	1000 ppm (STEL)	1000 ppm	1000 ppm	NE







- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** Not established.

8.2 EXPOSURE CONTROLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Engineering Controls Respiratory Protection	Use in well-ventilated environment. None needed in normal circumstances of use.	Use in well-ventilated environment. None needed in normal circumstances of use.
Hand Protection	Neoprene or nitrile gloves are recommended. Ensure gloves are intact prior to use.	Standard chemical-resistant gloves used in janitorial work are recommended.
Eye Protection	Safety glasses. Face-shield should be added if splashes/sprays could occur.	Safety glasses.
Body Protection	Standard protection used in janitorial service. If splashes or sprays can occur, a rubber apron should be used. Rubber apron should be added if splashes/sprays could occur.	Standard protection used in janitorial service. Rubber apron should be added if splashes/sprays could occur.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

8.3 PERSONAL PROTECTION SYMBOLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hand Protection		
Eye/Face Protection		
Body Protection		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Appearance	Yellow liquid.	Clear, colorless liquid.
Odor	Citrus odor.	Pleasant.
Odor Threshold	Not determined.	Not determined.
pH	6.0-8.0	Approximately 7
Melting Point/Freezing Point	No data.	Approx. 0°C (32 °F).
Initial Boiling Point/Boiling Range	>100°C (210 °F).	Approximately 100°C (212°F).
Flash Point	54.4°C (130 °F).	Not applicable.
Evaporation Rate (Water = 1)	No data available.	Approx. 1.0.
Flammability	Class II Combustible Liquid.	Not applicable.
Upper/Lower Explosive Limits	Not applicable.	Not applicable.
Vapor Pressure	Not determined.	Not determined.
Vapor Density	Not determined.	Not determined.
Relative Density (Density)	No data available.	Approx. 1.0.
Solubility	Completely soluble in water.	Completely soluble in water.
Partition Coefficient/n-octanol/water	Not determined.	Not determined.
Autoignition Temperature	Not applicable.	Not applicable.
Decomposition Temperature	Not determined.	Not determined.
Viscosity	Not determined.	Not determined.

9.2 OTHER INFORMATION

- VOC (less water & exempt): > 51 G/L.
- WEIGHT% VOC: 2.5%.

SECTION 10: STABILITY AND REACTIVITY

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

10.1 REACTIVITY

- Not reactive under typical conditions of use or handling.

10.2 CHEMICAL STABILITY

- Normally stable under standard temperatures and pressures.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

- This product is not self-reactive, water-reactive, or air-reactive.
- This product will not undergo hazardous polymerization.

SECTION 10: STABILITY AND REACTIVITY (Continued)

10.4 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals.

10.5 INCOMPATIBLE MATERIALS

- Strong oxidizing agents, reducing agents, strong acids, strong bases, aluminum, soft metals, water reactive materials.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition of this product include oxides of carbon (i.e., carbon monoxide and carbon dioxide), hydrogen chloride, ammonia, and nitrogen oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- **ACUTE TOXICITY:**

- **TOXICOLOGY DATA:** The following data are available for components of this product.

QUATERNARY AMMONIUM COMPOUNDS,
BENZYL-C12-16-ALKYLDIMETHYL,
CHLORIDES

LD₅₀ (oral, rat) = 426 mg/kg

ETHANOL

LD₅₀ (Oral, Rat) = 7060 mg/kg

LC₅₀ (Inhalation, Rat) = 20,000 mg/kg; 10
hours

1-DECANAMINIUM, N-DECYL-N,N-
DIMETHYL-, CHLORIDE

LD₅₀ (oral, rat) = 84 mg/kg

LD₅₀ (dermal, rat) > 2000 mg/kg

- **DEGREE OF IRRITATION:** See Section 4 (First Aid Measures) for more details. The following data are available for components of this product:

1-DECANAMINIUM, N-DECYL-N,N-
DIMETHYL-, CHLORIDE

Skin, Rabbit = Corrosive, 1 hour

- **SENSITIZATION:** The components of this product are not reported to have skin or respiratory sensitization effects,
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazards Information) and Section 4 (First Aid Measures) for additional details.

Eyes	Very irritating the eyes.
Skin	Moderately to seriously irritating, depending on duration of exposure.
Inhalation	May cause mild respiratory tract irritation if mists are inhaled.
Ingestion	Causes gastrointestinal system irritation and other adverse effects.

- **CHRONIC TOXICITY:**

- **CARCINOGENICITY STATUS:** Not applicable.
- **REPRODUCTIVE TOXICITY INFORMATION:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.
- **MUTAGENIC EFFECTS:** The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.
- **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.
- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **OTHER INFORMATION:**
 - **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
 - **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

12.1 TOXICITY

- Based on available data, this product may be harmful or fatal to contaminated terrestrial or aquatic plants or animals, depending on the volume released into the environment.
- The following aquatic toxicity data are available for components of this product.

QUATERNARY AMMONIUM COMPOUNDS,
BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES
LC50 (Morone saxatilis): fry, 14100. µg/L/96 hours

1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-,
CHLORIDE
LC50 (Brachydanio rerio): 0.49 mg/L - 96 hours
EC50 (Daphnia magna): 0.094 mg/L - 48 hours

12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation. The following data are available for components of this product:
 - **1-DECANAMINIUM, N-DECYL-N,N-DIMETHYL-, CHLORIDE:** Aerobic - Exposure time 28 days; Result: 69 % - Readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.

12.4 MOBILITY IN SOIL

- It is to be expected this product will have some mobility in soil.

12.5 OTHER ADVERSE EFFECTS

- None reported.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

Product as SOLD

Dispose of in accordance with local, State and Federal regulations.

Product at USE DILUTION

Dispose of unused product in accordance with local, State and Federal regulations.

13.2 DISPOSAL CONSIDERATIONS

- **EPA RCRA WASTE CODE:** Not applicable.

SECTION 14: TRANSPORT INFORMATION

Information in this section is for **Product as SOLD**.

14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
UN 1993	Flammable liquids, n.o.s (Ethanol)	III	3	Flammable Liquid	128	Not Applicable

SECTION 14: TRANSPORT INFORMATION

- **LIMITED QUANTITY:** For flammable liquids in Packing Group III and combustible liquids, inner packagings not over 5.0 L (1.3 gallons) net capacity each, packed in a strong outer packaging, follow rules under 49 CFR 173.150.
- **CANADIAN TRANSPORTATION INFORMATION:** This product is regulated by Transport Canada as dangerous goods under Canadian transportation standards. Refer to above information.
- **IATA DESIGNATION:** This product is regulated as dangerous goods by the International Air Transport Association.

Proper Shipping Name	Passenger and Cargo Aircraft				Cargo Aircraft Only	
	Limited Quantity		Packing Instruction	Max. Qty per PKG	Packing Instruction	Max. Qty per PKG
	Packing Instruction	Max. Qty per PKG				
Flammable liquid, n.o.s (Ethanol)	Y344	10L	355	60L	366	220L

- **IMO DESIGNATION:** This product is regulated as dangerous goods by the International Maritime Organization.

Proper Shipping Name	Limited and Excepted Quantity Provisions		Packing		EmS
	Limited Quantities	Excepted Quantities	Instructions	Provisions	
Flammable liquid, n.o.s (Ethanol)	5L	E1	P001 LP01	5L	FE-SE

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT

- **OTHER IMPORTANT U.S. REGULATIONS**
 - **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** ACUTE: Yes; CHRONIC: No; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
 - **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable.
 - **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
 - **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **INTERNATIONAL REGULATIONS**
 - **CANADIAN REGULATORY STATUS:** The product is classified as hazardous under Canadian Controlled Products regulations (SOR-88-66).
 - Classification: B3 – Combustible Liquid; D2B – Materials Causing Other Toxic Effects/Toxic
 - This SDS contains all the information required by the CPR.
 - **CANADIAN DSL/NDSL INVENTORY STATUS:** The listed components of this product are on the DSL/NDSL Inventory.
 - **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priorities Substances Lists.
 - **GERMAN WATER HAZARD CLASSIFICATION:** 2 (hazard to waters).



SECTION 16: OTHER INFORMATION

16.1 INDICATION OF CHANGE

- **DATE OF REVISION:** April 27, 2015
- **SUPERCEDES:** September 5, 2014
- **CHANGE INDICATED:** Update of OSHA Hazard Communication Standard (29 CFR 1910.1200),

SECTION 16: OTHER INFORMATION

16.2 KEY LITERATURE REFERENCES AND SOURCES FOR DATA

- SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- Federal OSHA Hazard Communication Standard: 29 CFR 1910.1200.
- SAX – Dangerous Properties of Industrial Materials
- RTECS – Registry of Effects of Toxic Chemicals
- TOXNET – <http://toxnet.nlm.nih.gov/>

16.3 HAZARDOUS MATERIALS CLASSIFICATION SYSTEM

Product as SOLD		Product at USE DILUTION	
Health	2	Health	0
Flammability	2	Flammability	0
Physical Hazard	0	Physical Hazard	0
Protective Equipment	C/D	Protective Equipment	B/C

HMIS Personal Protective Equipment Rating:
Occupational Use situations: C - Safety glasses and gloves and rubber apron/body protection. D: Add face-shield if splashes/sprays are anticipated.

HMIS Personal Protective Equipment Rating:
Occupational Use situations: B - Safety glasses and gloves. C: Rubber Apron should be added if splashes/sprays are anticipated.

16.4 DISCLAIMER

WAXIE Sanitary Supply makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of their own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by WAXIE Sanitary Supply as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does WAXIE Sanitary Supply assume any liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. WAXIE Sanitary Supply does not recommend blending this product with any other chemicals. All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

16.5 ABBREVIATIONS AND ACRONYMS

ALL SECTIONS: OSHA: U.S. Federal Occupational Safety and Health Administration. WHMIS: Canadian Workplace Hazardous Materials Standard. GHS: Globally Harmonized System of Classification of Chemical Substances. REACH: European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

SECTION 2: CAS Number: Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

SECTION 5: NFPA: National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

SECTION 8: NE: Not established. ACGIH: American Conference of Government Industrial Hygienists; TWA: Time-Weighted Average (over an 8-hour work day); STEL: Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); C: Ceiling Limit (concentration not to be exceeded in a work environment). PEL: Permissible Exposure Limit. NIOSH: National Institute of Occupational Safety and Health; REL: Recommended Exposure Limit; IDLH: Immediately Dangerous to Life and Health Concentrations. Note: In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. ppm: Parts per Million. mg/m³: Milligrams per cubic meter. mppcf: Millions of Particles per Cubic Foot. BEI: Biological Exposure Limit.

SECTION 9: pH: Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs.

SECTION 9 (Continued): LOWER EXPLOSIVE LIMIT (LEL): The minimal concentration of flammable vapors in air which will sustain ignition. UPPER EXPLOSIVE LIMIT (UEL): The maximum concentration of flammable vapors in air which will sustain ignition. ≈: Approximately symbol. VOC: Volatile Organic Compound.

SECTION 11: CARCINOGENICITY STATUS: NTP: National Toxicology Program. IARC: International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** Mutagen: Substance capable of causing chromosomal damage to cells. Embryotoxin: Substance capable of damaging the developing embryo in an overexposed female. Teratogen: Substance capable of damaging the developing fetus in an overexposed female. Reproductive toxin: Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** LDxx or LCxx: The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. TDxx or TCxx: The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.

SECTION 12: EC50: Effect Concentration (on 50% of study group); BOD: Biological Oxygen Demand. N/LOEC: No/Lowest Observable Effect Concentration.

SECTION 13: RCRA: Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. EPA RCRA Waste Codes: Defined in 40 CFR Section 261.

SECTION 15: CERCLA: Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and SARA: (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. TSCA: Toxic Substances Control Act: Rules regulating the manufacture and sale of chemicals found in 40 CFR 700-766. DSL/NDL: Canadian Domestic Substances and Non-Domestic Substances Lists.

SECTION 16: HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING: This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.



Office Products Group

MATERIAL SAFETY DATA SHEET

MSDS # 02270

Section One: Identification

Sanford, L.P.
2707 Butterfield Road
Oak Brook, IL 60523 USA
800-323-0749 or 630-481-2000

EMERGENCY MEDICAL NUMBER:

888-786-0972

Product Name: Turquoise Drawing Pencils and Lead (Graphite Rods)
Colors: Includes: Filmograph Leads, Filmograph Pencils

Section Two: Hazard Identification

This product is not hazardous under normal use conditions.

Section Three: Composition

This product does not contain Hazardous Material as defined in 29 CFR 1910.1200

Section Four: First Aid Measures

Inhalation:
Skin Contact:
Eye Contact:
Ingestion:

Section Five: Fire Fighting Measures

Flash Point:
Flammability Limits (% by volume): Lower: Upper:
Extinguishing Media:
Special Fire Fighting Measures: Pencil products stored in bulk are subject to ignition by fire and may, in the the case of fire, release toxic and other irritating gases. A self-contained breathing apparatus should be used when there is a potential exposure to combustion products of pencils burning in bulk.
Unusual Fire and Explosion Hazards:

Section Six: Accidental Release Measures

In Case of Spill or Accidental Release:

Section Seven: Handling and Storage

Handling:
Storage:

Section Eight: Exposure Controls and Personal Protection

Eye Protection:
Clothing:
Respirator:
Ventilation:

Section Nine: Physical and Chemical Properties

Boiling Point:
Specific Gravity:
Vapor Pressure:
Solubility in Water:
Evaporation Rate:
Appearance/Odor:

Section Ten: Stability and Reactivity

Stability:
Conditions to Avoid:
Chemical Incompatibility:
Hazardous Decomposition:
Hazardous Polymerization:

Section Eleven: Toxicological Information

See Section Two: Hazard Identification for any hazards

Section Twelve: Ecological Information

Not available

Section Thirteen: Disposal Considerations

Dispose in accordance with Federal, State, and Local Regulations.

Section Fourteen: Transport Information

DOT: Not regulated
IATA: Not regulated
IMO: Not regulated

Section Fifteen: Regulatory Information

TSCA: The product listed on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory

Section Sixteen: Other Information

HMIS Code	
Health	
Flammability	
Reactivity	
Personal Protection	

0=Minimal / 4 = Severe

NewellRubbermaid, Inc (Sanford L.P) has been advised by Counsel that the OSHA Hazard Communication Standard and the Health Canada Workplace Hazardous Materials Information Standard do not apply to the product described in this Material Safety Data Sheet. The reasons for the exemptions are contained in 29 CFR 1910.1200(b)(6)(ix) as amended Sept 14, 2009 per the Code of Federal Regulations and also Canadian Hazardous Products Act part 12 section (f) as amended June 1, 2009. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by nor is this MSDS meant to comply with all requirements of the hazard communication standards.

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 416.00

Revision Date: May 21, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Iron *Iron Filings*

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

This SDS is for bulk pieces of iron metal, such as wire, strips, and sheets. Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed. Please see SDS 416.50 for iron powder or iron filings.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iron	7439-89-6	Fe	55.85	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Finely divided iron can be flammable.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.
Moisture sensitive material.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Malleable silver-white metal. Odorless. Melting point: 1536 °C
Soluble: Sulfuric, hydrochloric, and nitric acids. Insoluble in water. Specific gravity: 7.87

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, moisture, strong oxidizing agents, halogens, phosphorus, and oxygen.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful dust.	ORL-RAT LD ₅₀ : 30 g/kg
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: N.A.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-096-4), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: May 21, 2015

1: Identification

Product identifier

Product name: Iron granules

Stock number: 39708

CAS Number:

7439-89-6

EC number:

231-096-4

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2: Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37: Irritating to eyes and respiratory system.

Information concerning particular hazards for human and environment: Not applicable

Hazards not otherwise classified: No information known.

Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word Warning

Hazard statements

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D2B - Toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1	Health (acute effects) = 1
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FIRE	1	Flammability = 1
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REACTIVITY	1	Physical Hazard = 1
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Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3: Composition/information on ingredients

Chemical characterization: Substances

3# Description:

7439-89-6 Iron

Product name: **Iron granules**

(Contd. of page 1)

Identification number(s):

number: 231-096-4

4: First-aid measures

Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5: Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents Water

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7: Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: No information known.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Do not store together with acids.

Store away from oxidizing agents.

Store away from halogens.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Specific end use(s) No further relevant information available.

8: Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

7439-89-6 Iron (100.0%)

EV (Canada) Long-term value: 1* 5** mg/m³
as iron; *salts, water-soluble; **welding fume

TLV (Canada) Long-term value: 5 mg/m³

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

(Contd. on page 3)

USA

Product name: Iron granules

(Contd. of page 2)

Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Working equipment: Use suitable respirator when high concentrations are present.
Recommended filter device for short term use:
Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.
Material of gloves: Nitrile rubber, NBR
Penetration time of glove material (in minutes): Not determined
Eye protection: Safety glasses
Body protection: Protective work clothing.

9: Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Various forms (powder/flake/crystalline/beads, etc.)
Color: Grey
Odor: Not determined
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: 1538 °C (2800 °F)
Boiling point/Boiling range: 2861 °C (5182 °F)
Sublimation temperature / start: Not determined
Flammability (solid, gaseous): Not determined
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.

Danger of explosion: Not determined.

Explosion limits:

Lower: Not determined
Upper: Not determined
Vapor pressure: Not applicable.
Density at 20 °C (68 °F): 7.87 g/cm³ (65.675 lbs/gal)
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.
Solubility in / Miscibility with water: Insoluble
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
Other information: No further relevant information available.

10: Stability and reactivity

Reactivity: No information known.
Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions: Reacts with strong oxidizing agents
Conditions to avoid: No further relevant information available.
Incompatible materials:
Acids
Oxidizing agents
Halogens
Hazardous decomposition products: Metal oxide fume

11: Toxicological information

Information on toxicological effects

Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral (LD50) 30000 mg/kg (rat)

Skin irritation or corrosion: May cause irritation

Eye irritation or corrosion: Causes serious eye damage.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity: No effects known.

Carcinogenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: May cause respiratory irritation.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

USA
(Contd. on page 4)

Product name: **Iron granules**

(Contd. of page 3)

Ecological information

Ecotoxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:
 Do not allow material to be released to the environment without proper governmental permits.
 Avoid transfer into the environment.
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13: Disposal considerations

Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14: Transport information

UN-Number DOT, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class	Not applicable
Packing group DOT, IMDG, IATA	Not applicable
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
...fine Pollutant (DOT):	No
UN "Model Regulation":	-

15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
 All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
 All components of this product are listed on the Canadian Domestic Substances List (DSL).
 SARA Section 313 (specific toxic chemical listings) Substance is not listed.
California Proposition 65
Prop 65 - Chemicals known to cause cancer Substance is not listed.
Prop 65 - Developmental toxicity Substance is not listed.
Prop 65 - Developmental toxicity, female Substance is not listed.
Prop 65 - Developmental toxicity, male Substance is not listed.
Information about limitation of use: For use only by technically qualified individuals.
Other regulations, limitations and prohibitive regulations
 Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
 The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
 Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.
REACH - Pre-registered substances Substance is listed.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organization
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 DOT: US Department of Transportation
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 HMIS: Hazardous Materials Identification System (USA)
 WHMIS: Workplace Hazardous Materials Information System (Canada)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 P: very Persistent and very Bioaccumulative
 ACGIH: American Conference of Governmental Industrial Hygienists (USA)
 OSHA: Occupational Safety and Health Administration (USA)
 NTP: National Toxicology Program (USA)

(Contd. on page 5)
USA

Product name: Iron granules

IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)

(Contd. of page 4)

USA

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 416.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Iron (strips)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Iron	7439-89-6	Fe	55.85	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Finely divided iron can be flammable.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.
Moisture sensitive material.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Malleable silver-white metal. Odorless. Melting point: 1536 °C
Soluble; Sulfuric, hydrochloric, and nitric acids. Insoluble in water. Specific gravity: 7.87

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, moisture, strong oxidizing agents, halogens, phosphorus, and oxygen.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful dust.	ORL-RAT LD ₅₀ : 30 g/kg
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: N.A.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-096-4), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 428.50

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Lactaid® Tablets

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Do not ingest any over-the-counter medications provided by Flinn Scientific. They are for laboratory use only since they have been stored by and processed on equipment used for nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Lactaid tablets Proprietary mixture containing Lactase, Mannitol, Cellulose, Sodium citrate, and Magnesium stearate.	63-42-3	Proprietary	Proprietary	Proprietary

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Pick up the tablets, place in a sealed bag or container, and dispose. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Do not ingest. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White tablet. Odorless.

Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.

ORL-RAT LD₅₀: N.A.

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 432.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

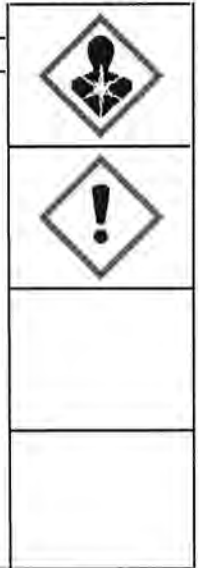
Lead (strip) (sinker) (shot)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and inhalation (Category 4). Harmful if swallowed or inhaled (H302+H332). Do not eat, drink or smoke when using this product (P270). Avoid breathing dust and fumes (P261).

Hazard class: Carcinogenicity (Category 2). Suspected of causing cancer (H351). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281). Elemental lead is a possible human carcinogen (IARC-2B).

Hazard class: Reproductive toxicity (Category 1A). May damage fertility or the unborn child (H360).

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Lead Forms: foil, sheets, shot, strips, and wire.	7439-92-1	Pb	207.19	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician (P301+P310+P330).

SECTION 5 — FIRE FIGHTING MEASURES

Finely divided lead dust is flammable.

Molten metal may release toxic fumes of lead.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.
Use fume hood when handling powder form.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Use fume hood when handling powder form.

Exposure guidelines: PEL/TLV 0.05 mg/m³ (OSHA/ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Heavy, ductile, gray solid. Odorless.

Soluble: Dilute nitric acid. Insoluble in water.

Lead wire also contains 1% antimony (CAS #7440-36-0)

Boiling point: 1740 °C

Melting point: 327.4 °C

Specific gravity: 11.35

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong acids, ammonium nitrate, hydrogen peroxide, sodium azide, zirconium, sodium acetylide, and chlorine.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Convulsions, seizures, weakness, muscle cramps, methemoglobinemia.

Chronic effects: Anemia, reproductive hazard, possible carcinogen.

Target organs: Nerves, brain, blood, kidneys, female/male reproductive system

ORL-Pigeon LD₅₀: 160 mg/kg

IHL-Human LCL₀: 10 ug/m³

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Accumulates in soil and water. Bioaccumulates in animals. Very toxic to aquatic life with long lasting effects

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27d is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-100-4), RCRA code D008.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 473.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Magnesium Chloride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Magnesium chloride, hexahydrate	7791-18-6	MgCl ₂ ·6H ₂ O	203.33	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area and sweep up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White to slightly green crystals or flakes. Odorless.
Soluble: Water and alcohol

Melting point: 100 °C (decomposes)
Specific gravity: 1.56

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, stomach pains, vomiting, diarrhea.

ORL-RAT LD₅₀: 8100 mg/kg

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: Central nervous system, kidneys.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

EINECS-listed (232-094-6).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 468.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Magnesium (ribbon)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable solids (Category 1). Flammable solid (H228). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Magnesium	7439-95-4	Mg	24.31	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable solid.

Water reactive metal; avoid contact with acids or water. When heated to decomposition, may emit toxic fumes.

In case of fire: Use a Class D or dry sand as a fire extinguisher. Avoid water contact, violent reaction with water.

NFPA CODE

H-0

F-1

R-1

No Water

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.
Store in a Flinn Saf-Stor™ can.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Silvery-white metal turnings or ribbon. Odorless.
Soluble: Acids. Insoluble in water.

Melting point: 651 °C
Specific gravity: 1.74

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with water, acids, acid chlorides, strong oxidizers, halogens, and chlorinated solvents.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: N.A.
IHL-RAT LC₅₀: N.A.
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Magnesium. Hazard class: 4.1, Flammable solid. UN number: UN1869.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-104-6), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

Milk (powdered)
non-fat, dry

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Nonfat-Dried Milk bovine
Product Number : M7409
Brand : Sigma

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

No ingredients are hazardous according to OSHA criteria.
No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

- 4.2 Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed**
no data available
-

5. FIREFIGHTING MEASURES

- 5.1 Extinguishing media**
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- 5.2 Special hazards arising from the substance or mixture**
Nature of decomposition products not known.
- 5.3 Advice for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.
- 5.4 Further information**
no data available
-

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures**
Avoid dust formation. Avoid breathing vapours, mist or gas.
For personal protection see section 8.
- 6.2 Environmental precautions**
Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up**
Sweep up and shovel. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections**
For disposal see section 13.
-

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling**
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities**
Keep container tightly closed in a dry and well-ventilated place.
- 7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
-

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
Components with workplace control parameters
Contains no substances with occupational exposure limit values.
- 8.2 Exposure controls**
Appropriate engineering controls
General industrial hygiene practice.
- Personal protective equipment**
Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

a) Appearance	Form: solid
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard
no data available

Additional Information
RTECS: Not available

12. ECOLOGICAL INFORMATION

- 12.1 Toxicity**
no data available
- 12.2 Persistence and degradability**
no data available
- 12.3 Bioaccumulative potential**
no data available
- 12.4 Mobility in soil**
no data available
- 12.5 Results of PBT and vPvB assessment**
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- 12.6 Other adverse effects**
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Nonfat-Dried Milk bovine

CAS-No.

Revision Date

-

New Jersey Right To Know Components

CAS-No.

Revision Date

Nonfat-Dried Milk bovine

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating

Health hazard: 0
Chronic Health Hazard:
Flammability: 0
Physical Hazard 0

NFPA Rating

Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.3

Revision Date: 06/25/2014

Print Date: 07/28/2016

N

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 539.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Nickel (strips)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Sensitization, skin (Category 1). May cause an allergic skin reaction (H317). Avoid breathing dust (P261).

Hazard class: Carcinogenicity (Category 2). Suspected of causing cancer (H351). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Specific target organ toxicity, repeated exposure (Category 1). Causes damage to organs through prolonged or repeated exposure (H372). Do not eat, drink or smoke when using this product (P270).

Nickel is a known human carcinogen by inhalation as dust or fume (IARC-1). Nickel in shot form is less hazardous than in dust form.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Nickel	7440-02-0	Ni	58.69	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).

If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Rinse cautiously with water for several minutes (P302+P351). Wash contaminated clothing before reuse (P363).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable as dust or fume.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides. Store in a cool, dry place. When in dust form, use only in a hood or in a well-ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves and eye protection (P280). Contaminated clothing should not be allowed out of the workplace (P272). Wash hands thoroughly after handling (P264).

Exposure guidelines: PEL 1 mg/m³ (OSHA); TLV 1.5 mg/m³ (inhalable fraction) (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Malleable, silver-gray metal, pellets, shot, powder and strips.

Melting point: 1455 °C

Odorless.

Specific gravity: 8.908

Soluble: Attacked by acids. Highly resistant to strong alkalis.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, oxidizing agents, and sulfur. Nickel may react violently with titanium, ammonium nitrate, potassium perchlorate, and hydrazoic acid.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful dust, irritant, sensitizer

ORL-RAT LD₅₀: N.A.

Chronic effects: Possible carcinogen

IHL-RAT LC₅₀: N.A.

Target organs: Lungs, nose

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-111-4), RCRA code D001, D003.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

O

P

Phenol Red Tablets

Legal Disclaimer

The information and recommendations in this publication are, to the best of our knowledge, information and belief, accurate at the date of publication.

Nothing herein is to be construed as a warranty, express or implied. In all cases it is the responsibility of the users to determine the applicability of such information or the suitability of any products for their own particular purpose.

1. Identification of the Substance/Mixture and the Company Undertaking

Product Identifier

Product Name:	* Phenol Red Tablets
Product Code:	2066631265 (50) (AL131B)
	2066631564 (250) (AT130)
	2066631565 (250) (AK131)
	2066613065 Pocket Kit pH PK131
	2066607017 Domestic Pool Tester Kit Bromine/pH & Balance SP316
	2066607029 Domestic Pool Tester Kit Oxygen/pH SP626
	2066607030 Domestic Pool Tester Kit Chlorine/pH SP610
	2066607032 Domestic Pool Tester Kit Chlorine/pH/Alkalinity SP612
	2066607033 Domestic Pool Tester Kit Chlorine/pH/Balance Water SP315
	2066615017 Comparator Kit Bromine/pH/Balance Water SP130
	2066615031 Comparator Kit Chlorine/pH SP116
	2066615032 Comparator Kit Chlorine/pH/Alkalinity SP117
	2066615033 Comparator Kit Chlorine/pH/Balance Water SP129
	2066615017 Comparator Kit Chlorine/pH/Cyanuric Acid/Balance Water SP129C
	2066623036 Cool Pooltester Refill Pack - Bromine

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Uses: Testing Water

Details of the Supplier of the Safety Data Sheet

Name of Supplier: Golden Coast Ltd
Address of Supplier: Fishleigh Road, Roundswell Commercial Park West, Barnstaple, Devon. EX31 3UA
Telephone: 01271 378100.
Responsible Person: Jamie Adams
Email: swimmer@goldenc.com

Emergency Telephone Number: 01271 378100 (office hours)

2. Hazards Identification

Not regarded as a health or environmental hazard under current legislation

Classification(1999/45) Not classified

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3. Composition/Information on Ingredients

Chemical Name: Ion Exchange Resin
Concentration: <1-5%
CAS Number:
EC Number:
Classification: Xi; R36

Chemical Name: Potassium Chloride
Concentration: 60-100%
CAS Number: 7447-40-7
EC Number:

Chemical Name: Ammonium Thiosulphate
Concentration: < 1%
CAS Number: 7681-11-0
EC Number: 231-982-0

Chemical Name: Phenol Red Indicator
Concentration: <1%
CAS Number: 34487-61-1
EC Number:

Chemical Name: Talc
Concentration: <1%
CAS Number: 14807-96-6
EC Number: 238-877-9

The full text for all r-Phrases are displayed in Section 16

4. First Aid Measures

If Inhaled: Unlikely route of exposure as the product does not contain volatile substances

If on Skin: Wash skin with soap and water. Get medical attention promptly if symptoms occur after washing

If in Eyes: Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists continue flushing during transport to hospital. Bring these instructions.

If Swallowed: Get medical attention



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5. Fire Fighting Measures

Extinguishing Media Use fire-extinguishing media appropriate for surrounding materials The product is not flammable

6. Accidental Release Measures

Personal Precautions: Follow precautions for safe handling described in this safety data sheet

Environmental Precautions: Not relevant considering the small amounts used.

Spill Clean Up Methods: No specific clean-up procedure noted. Non-hazardous substance

7. Handling and Storage

Usage Precautions: Read and follow manufacturers' recommendations.

Storage Precautions: Store in a cool and well-ventilated place

8. Exposure Controls/Personal Protection

Protective Equipment



Hand Protection: No specific hand protection noted, but gloves may still be advisable

Eye Protection: Wear approved chemical safety goggles where eye exposure is reasonably probable

Hygiene Measures: No specific hygiene procedures noted, but good personal hygiene practices are always advisable, Especially when working with chemicals

9. Physical and Chemical Properties

Form: Solid

Colour: Red brown

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Odour: Odourless

10. Stability and Reactivity

Stability: Stable under normal circumstances and recommended use

11. Toxicological Information

Toxicological Information: No information available
 Ingestion: May cause discomfort if swallowed
 Contact with Skin: Skin irritation is not anticipated when used normally
 Contact with Eyes: Particles eyes may cause irritation and smarting
 Route of Entry: Skin and/or eye contact. Ingestion

12. Ecological Information

Ecotoxicity

There are no data on the ecotoxicity of this product. The product components are not classified as environmentally hazardous> However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment

13. Disposal Considerations

Disposal Methods: Dispose of waste and residues in accordance with local authority requirements

14. Transport Information

General: The product is not covered by international regulation of the transport of dangerous goods (IMDG, IATA, ADR/RID)
 No transport warning sign required

15. Regulatory Information

Contains: ION EXCHANGE RESIN

Risk Phrases: NC Not classified

Safety Phrases: NC Not classified

SDS Sheet

Page 5 of 5

Creation Date: 17.02.2000

Revision Date: 20/07/2012

Legal Disclaimer

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Nothing herein is to be construed as a warranty, express or implied. In all cases it is the responsibility of the users to determine the applicability of such information or the suitability of any products for their own particular purpose.

16. Other Information

Risk Phrases in full

R36

Irritating to eyes

NC

Not classified

Note:

This data sheet does not constitute a user's assessment of workplace risk as required by HSW act, COSHH, management of health and safety at work regulations, or other health and safety legislation.



Safety Data Sheet

1. Identification of the Substance or Mixture and of the Supplier

1.1 Product Identifier

Product Code(s): SS40160

Description: Broad Range pH Indicator Paper

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product to be used for analytical purposes only

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer/Supplier:

Lethan Corporation
1524 Bender Ave., #A102
Hamilton, OH 45011
(513)783-5673

1.4 Emergency telephone number

ChemTel, Inc.
(800)255-3924, +1(813)248-0585

2. Hazards Identification

2.1 Classification of substance or mixture

The product is not classified as hazardous according to GHS or OSHA regulations. The product is an "Article" as defined in the OSHA Hazard Communication Standard (29CFR 1910.1200(c), and therefore is outside the scope of the GHS standard and does not require an SDS. This SDS is provided for informational purposes only.

2.2 Label elements

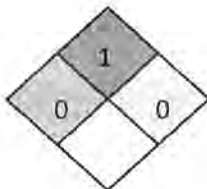
The product does not require labeling.
The product does not require any hazard pictograms.
The product does not require any signal word.

2.3 Other hazards

NFPA and HMIS ratings (scale 0-4)

Health = 0
Fire = 1
Reactivity = 0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe



Safety Data Sheet

3. Composition/Information on Ingredients

3.1 Substances or Mixtures

Description: Mixture of substances listed below.

Chemical Name	CAS #	EINECS #	Concentration
Cellulose	9004-34-6	232-674-9	95-100%
Indicator dye(s)	n/a	n/a	< 1%
Surfactants	n/a	n/a	< 1%
Polymers	n/a	n/a	< 1%
Buffers	n/a	n/a	< 1%

Ingredients not listed by name are proprietary to Precision Laboratories and considered a trade secret. These ingredients may be disclosed only in a medical emergency.

4. First Aid Measures

4.1 Description of first aid measures

General information: Adverse health effects are not reasonably expected from normal use of product.

After inhalation: Unlikely route of exposure. Supply fresh air; consult with doctor in case of complaints.

After eye contact: Unlikely route of exposure. Remove contact lenses if worn. Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After skin irritation: Immediately wash with water and soap. Rinse thoroughly. If skin irritation continues, consult a doctor.

After swallowing: May cause discomfort if ingested in large amounts. Contact medical help immediately. Do not induce vomiting unless directed to do so by a doctor.

4.2 Most important symptoms/effects, acute and delayed

Adverse health effects are not reasonably expected from normal use of product.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Indications for management of overdose or pediatric ingestion only.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: None

Safety Data Sheet

- 5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire
- 5.3 Advice to firefighters**
Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.
Additional Information
No further relevant information is available

6. Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
Not required
- 6.2 Environmental precautions**
No special measures required.
- 6.3 Methods and material for contamination and cleaning up**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
- 6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. Handling and Storage

- 7.1 Precautions for safe handling**
Handle product in accordance to test instruction provided with product, if available.
Store in a cool, dry place in tightly closed containers.
- 7.2 Conditions for safe storage, including any incompatibilities**
Storage:
Requirements to be met by storerooms and containers:
Protect from humidity and water.
Avoid storage near extreme heat, ignition sources or open flame.
Keep away from children.
Information about storage in one common storage facility:
Keep product in original packages tightly closed during handling
Further information about storage conditions:
No special requirements
- 7.3 Specific end use(s)**
No further relevant information available.

Safety Data Sheet

8. Exposure Controls/Personal Protection

Additional information about design of technical facilities:

No further data; see Item 7.

8.1 Control parameters – Ingredients with limit values that require monitoring at the workplace:

Not required.

9004-34-6 Cellulose	
PEL (USA)	Long term value: 15* 5** mg/m ³ *total dust ** respirable fraction
REL (USA)	Long term value: 10* 5** mg/m ³ *total dust ** respirable fraction
TLV (USA)	Long term value: 10 mg/m ³
EL (Canada)	Long term value: 10 mg/m ³
EV (Canada)	Long term value: 10 mg/m ³ Paper fiber, total dust

DNELs No further relevant information available.

PNECs No further relevant information available.

Additional information: The lists valid during the making were used as basis

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be taken when handling chemicals.

Keep away from foodstuffs, beverages, and feed.

Respiratory protection:

Not required under normal conditions of use.

Protection of hands:

Gloves not required under normal conditions of use.

Eye protection:

Not required under normal conditions of use.

Body protection:

Not required under normal conditions of use.

Limitation and supervision of exposure into the environment:

No special requirements.

Risk management measures:

No special requirements.

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9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

General Information

Appearance:

Form:	Test strip, liquid impregnated on inert carrier material
Color:	Product may have color.
Odor:	Odorless
Odor threshold:	Not determined
pH value at 20°C:	Not applicable
Melting point:	Not applicable
Boiling point:	Not applicable
Flash point:	Not applicable
Auto/Self-ignition temperature:	>451°F/232°C
Decomposition temperature:	Not determined
Self-igniting:	Not determined
Danger of explosion:	Product does not present an explosive hazard
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor Pressure:	Not applicable
Density at 20°C:	Not applicable
Relative density:	Not determined
Vapor density:	Not applicable
Evaporation rate:	Not applicable
Solubility in/Miscible with water:	chemicals in strip are soluble in water
Partition coefficient:	
(n-octanol/water)	Not determined
Viscosity:	
Dynamic:	Not applicable
Kinematic:	Not applicable

9.2 Other information No further relevant information available

10. Stability and Reactivity

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition/conditions to be avoided:

To avoid thermal decomposition do not overheat.

10.3 Possibility of hazardous reactions

None under normal operating conditions.

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10.4 Conditions to avoid

Keep away from ignition sources do not smoke around product
Keep product stored in a cool, dry place

10.5 Incompatible materials

None under normal operating conditions

10.6 Hazardous decomposition products:

None under normal operating conditions

11. Toxicological Information

11.1 Information on toxicological effects

This information is valid for pure substances.

Acute toxicity:

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cellulose (CAS No. 9004-34-6)	> 5000 mg/kg	> 2000 mg/kg	> 5800 _{4h} mg/m ³
Indicator dye(s)	n/a	n/a	n/a
Surfactants	n/a	n/a	n/a
Polymers	n/a	n/a	n/a
Buffers	n/a	n/a	n/a

Primary irritant effect:

On the skin: Slight irritant effect on skin and mucous membranes.

On the eye: Slight irritant effect on eyes

Sensitization:

No sensitizing effects known.

Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects based on our experience and information available

The substance is not subject to classification according to the latest version of the EU lists

12. Ecological Information

12.1 Toxicity

Aquatic toxicity:

This product contains materials that are harmful to the environment.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bio accumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

General notes: The product contains materials that are harmful to the environment.

Safety Data Sheet

12.5 Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.6 Other adverse effects

No further relevant information available.

13. Disposal Considerations

13.1 Waste treatment methods

Recommendation

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

Uncleaned packaging

Recommendation

Disposal must be made according to official regulations.

14. Transport Information

14.1 UN-Number

DOT, ADR, AND, IMDG, IATA Not regulated

14.2 UN proper shipping name

DOT, ADR, AND, IMDG, IATA Not regulated

14.3 Transport hazard class(es)

DOT, ADR, AND, IMDG, IATA
Class Not regulated

14.4 Packaging group

DOT, ADR, IMDG, IATA Not regulated

14.5 Environmental hazards:

Marine pollutant: No

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Not applicable

UN "Model Regulation": ---

Safety Data Sheet

15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The product is not classified as hazardous according to GHS or OSHA regulations.

The product is an "Article" as defined in the OSHA Hazard Communication Standard (29CFR 1910.1200(c), and therefore is outside the scope of the GHS standard and does not require an SDS.

No other regulatory information is available.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

16. Other Information

This information is based on our present knowledge; however, this does not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The information provided in this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

Precision Laboratories Inc. will not be responsible for damages resulting from the use or reliance upon this information.

Sources

SDS prepared by:

Lethan Corporation
1524 Bender Ave., #A102
Hamilton, OH 45011
(513) 783-5673

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 621.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Chloride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium chloride	7447-40-7	KCl	74.56	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Keep tightly closed and store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless or white crystals. Odorless.

Soluble: Water. Slightly in alcohol.

Melting point: 772 °C

Specific gravity: 1.987

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong acids.

Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant

Chronic effects: N.A.

Target organs: stomach, blood

ORL-RAT LD₅₀: 2600 mg/kg

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-211-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

Section 1 Chemical Product and Company Information



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	POTASSIUM IODIDE
---------	------------------

Synonyms	None
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Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: WARNING

Pictograms: GHS07

Target organs: Thyroid



GHS Classification:

Acute toxicity, oral (Category 5)

Skin sensitization (Category 1A)

GHS Label information: Hazard statement:

H303: May be harmful if swallowed.

H317: May cause an allergic skin reaction.

Precautionary statement:

P261: Avoid breathing dust

P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of water and soap.

P333+P313: If skin irritation or rash occurs: Get medical attention.

P312: Call a POISON CENTER or doctor if you feel unwell.

P362+P364: Take off contaminated clothing and wash it before reuse.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Potassium iodide	7681-11-0	100%	231-659-4

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Contact with strong oxidizers may cause fire or explosion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dust. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulates not otherwise classified	None established	TWA: 15 ppm total dust	None established

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Solid, white crystals.

Odor: No odor.

Odor threshold: Data not available.

pH: 7.0

Melting / Freezing point: 680°C (1256°F)

Boiling point: 1330°C (2426°F)

Flash point: Non-combustible

Evaporation rate (= 1): Not applicable

Flammability (solid/gas): Data not available.

Explosion limits: Lower / Upper: Data not available

Vapor pressure (mm Hg): Negligible

Vapor density (Air = 1): Data not available

Relative density (Specific gravity): 3.12

Solubility(ies): Complete in water.

Partition coefficient: Data not available

Auto-ignition temperature: Data not available

Decomposition temperature: Data not available.

Viscosity: Data not available.

Molecular formula: KI

Molecular weight: 166.01

Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Protect from light, air, moisture and excessive temperatures.

Incompatible materials: Reacts violently with alkaline metals, diazonium salts, oxidants, bromine and chlorine trifluorides, and fluorine perchlorate, and may cause explosion and/or fire. NOTE: Solutions of this product are corrosive to most metals.

Hazardous decomposition products: Yields iodine when in contact with air. Releases iodine, potassium monoxide, and hydrogen iodide, when in contact with moist air.

Section 11 Toxicological Information

Acute toxicity: Oral-rat LD50: 4800 mg/kg

Skin corrosion/irritation: Data not available

Serious eye damage/irritation: Data not available

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May cause irritation of respiratory tract.

Ingestion: Large doses may cause gastrointestinal upset and weakness.

Skin: May cause mild irritation and redness on prolonged contact.

Eyes: Can be irritating with redness and pain.

Signs and symptoms of exposure: Hypothyroidism with possibility of goitre (hypertrophy of the thyroid gland), possible sensitization of skin. Chronic ingestion of iodides may produce "iodism" which may be characterized by skin rash, running nose, headache, and irritation of mucous membranes. Weakness, anemia, loss of weight, and general depression may also occur. **Additional information:** RTECS #: NN1575000

Section 12 Ecological Information

Toxicity to fish: No data available

Toxicity to daphnia and other aquatic invertebrates: No data available

Toxicity to algae: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: Not applicable

Shipping name: Not Regulated

Hazard class: Not applicable

Packing group: Not applicable

Reportable Quantity: No

Marine pollutant: No

Exceptions: Not applicable

2012 ERG Guide # Not applicable

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Potassium iodide	Listed	Not listed	Not listed	Listed	Not listed	D2A

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: October 1, 2013

Supersedes: January 4, 2012

Safety Data Sheet

Starch, Soluble (Potato)

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Starch, Soluble
Recommended Use: Science education applications
Synonyms: Soluble Starch, Starch, Amylodextrin
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: Not a dangerous substance according to GHS classification criteria.
No known OSHA hazards.

Acute Toxicity Oral Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Dermal Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Gas Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Vapor Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity
Acute Toxicity Inhalation Dust/Mist Contains 100 % of the mixture consists of ingredient(s) of unknown toxicity

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Starch, Soluble	9005-84-9	100

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Avoid Dusting. May become explosive when dispersed in air. Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: No adverse health affects expected from the clean-up of spilled material. Follow personal protective equipment recommendations found in Section 8 of this (M)SDS. Poses little or no immediate hazard

Safety Data Sheet

No special spill clean-up considerations. Collect and discard in regular trash.

Section 7 Handling and Storage

Handling: Keep container tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Avoid creating and inhaling dust. Do not ingest or take internally.

Storage: Keep container tightly closed in a cool, well-ventilated place.

Storage Code: Green - general chemical storage

Section 8 Protection Information

<u>Chemical Name</u>	<u>ACGIH</u>	<u>OSHA PEL</u>
	(TWA)	(TWA)
	(STEL)	(STEL)
No data available	N/A	N/A
	N/A	N/A

Control Parameters

Engineering Measures: No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE): Lab coat, apron, eye wash, safety shower.

Respiratory Protection: No respiratory protection required under normal conditions of use.

Respirator Type(s): NIOSH approved air purifying respirator with dust/mist filter.

Eye Protection: Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection: Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves: No information available

Section 9 Physical Data

Formula: C ₁₂ H ₂₂ O ₁₁	Vapor Pressure: N/A
Molecular Weight: 342.30 g/mol	Evaporation Rate (BuAc=1): N/A
Appearance: White Solid	Vapor Density (Air=1): N/A
Odor: None	Specific Gravity: N/A
Odor Threshold: No data available	Solubility in Water: Soluble
pH: No data available	Log Pow (calculated): No data available
Melting Point: No data available	Autoignition Temperature: No data available
Boiling Point: No data available	Decomposition Temperature: No data available
Flash Point: No data available	Viscosity: No data available
Flammable Limits in Air: N/A	Percent Volatile by Volume: N/A

Section 10 Reactivity Data

Reactivity: Not generally reactive under normal conditions.

Chemical Stability: Stable under normal conditions.

Conditions to Avoid: None known.

Incompatible Materials: Strong oxidizing agents

Hazardous Polymerization: Will not occur

Section 11 Toxicity Data

Routes of Entry: Inhalation, ingestion, eye or skin contact.

Symptoms (Acute): Eye Irritation, Respiratory Irritation

Delayed Effects: No data available

Acute Toxicity:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
No data available	9005-84-9	Not determined	Not determined	Not determined

Carcinogenicity:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>IARC</u>	<u>NTP</u>	<u>OSHA</u>
No data available	9005-84-9	Not listed	Not listed	Not listed

Chronic Effects:

Starch, Soluble

Safety Data Sheet

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: Eyes, Respiratory system
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Section 12 Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name N/A **CAS Number** 9005-84-9 **Eco Toxicity**

Section 13 Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): This material is not considered to be a RCRA hazardous waste.

Section 14 Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by DOT.
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

Section 15 Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
No data available	9005-84-9	No	No	No	No	No

Section 16 Additional Information

Revised: 09/03/2014

Replaces: 09/03/2014

Printed: 09-11-2014

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health



Latest revision date: 10/08/2015
Version: 1.0

United States
Material Safety Data Sheet

Miracle-Gro Lawn Products Inc
14111 Scottslawn Road
Marysville, Ohio 43041
United States

24 h. EMERGENCY TELEPHONE NUMBER
CHEMTREC (U.S.) 1-800-424-9300
CHEMTREC (International) 1-703-527-3887
Non-Emergency Calls
1-937-644-0011

MIRACLE-GRO MOISTURE CONTROL POTTING MIX

Section 1. Identification

GHS product identifier : MIRACLE-GRO MOISTURE CONTROL POTTING MIX
Product type : Fertilizer
SDS # : 320000000125

Relevant identified uses of the substance or mixture and uses advised against
Use only in accordance with label directions.

Section 2. Hazards identification

This product is regulated by the Consumer Product Safety Commission (CPSC) for label precautionary text see Section 15.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : None

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

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Response	:	Not applicable.
Storage	:	Not applicable.
Disposal	:	Not applicable.
Supplemental label elements	:	None known.
Hazards not otherwise classified	:	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Chemical name	:	Not available.
Other means of identification	:	Not available.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	:	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Skin contact	:	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	No known significant effects or critical hazards.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact	:	No specific data.
Inhalation	:	No specific data.
Skin contact	:	No specific data.
Ingestion	:	No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

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- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.
- Specific hazards arising from the chemical** : No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : No specific data.
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

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- Spill** :
- Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** :
- Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** :
- Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** :
- Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

- Appropriate engineering controls** :
- Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** :
- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** :
- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** :
- Safety eyewear complying with an approved standard should be used

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when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : [Growing media]
- Color** : Various
- Odor** : Earthy odor
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Not available.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : **Lower:** Not available.
Upper: Not available.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Not available.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : **Dynamic:** Not available.

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Kinematic: Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
	LD50 Oral	Rat	> 5,000 mg/kg	-
	LC50 Inhalation	Rat	> 5 mg/l	4 h
	LD50 Dermal	Rat	> 5,000 mg/kg	-

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
	Eyes - Redness of the conjunctivae	Rabbit	1.0		-
	Skin - Erythema/Eschar	Rabbit	1.0		-

Conclusion/Summary

Skin : May cause skin irritation.
Eyes : May cause eye irritation.
Respiratory : May cause respiratory irritation

Sensitization

Product/ingredient name	Route of exposure	Species	Result
	Skin	Guinea pig	Not sensitizing

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Conclusion/Summary
Skin : Not sensitizing - based on the individual components.
Respiratory : Not sensitizing - based on the individual components.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Velcro Closure

Information on the likely routes of exposure : Not available.

Potential chronic health effects

Conclusion/Summary : No known significant effects or critical hazards.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Conclusion/Summary : Not available.

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Persistence and degradability

Conclusion/Summary : Not available.

Mobility in soil

Soil/water partition coefficient (KOC) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations
--

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information
--

Not classified as dangerous

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

Precautionary statements

Signal word : No signal word.

Emergency Overview : No harmful effects expected.

U.S. Federal regulations : **United States inventory (TSCA 8b):**
Not determined.

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State regulations

California Prop. 65
Not available.

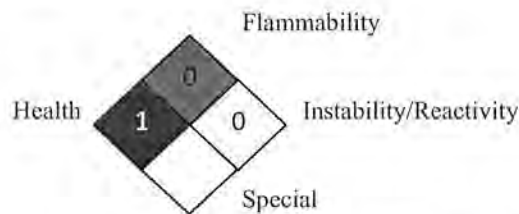
International lists

National inventory

- Australia : At least one component is not listed.
- Canada : At least one component is not listed.
- China : At least one component is not listed.
- Europe : At least one component is not listed.
- Japan : At least one component is not listed.
- Malaysia : Not determined.
- New Zealand : At least one component is not listed.
- Philippines : At least one component is not listed.
- Republic of Korea : At least one component is not listed.
- Taiwan : Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.):



Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety. Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Safety Data Sheet

PTC Taste Test Strips

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: PTC Taste Test Strips
Recommended Use: Science education applications
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification:

Other Safety Precautions: May cause irritation.
May cause gastrointestinal discomfort.
May cause irritation to respiratory tract.
May cause irritation to skin.

Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Phenylthiourea	103-85-5	
PTC is highly toxic, but it has been calculated that each test strip contains less than 0.3 mg of PTC, far below the toxicity level. Contains <0.02% of PTC		

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use media suitable to extinguish surrounding fire.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: Fire or excessive heat may produce hazardous decomposition products.
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide

Section 6 Spill or Leak Procedures

No data.

Section 7 Handling and Storage

Handling: Do not ingest or take internally.
Storage: Keep container tightly closed in a cool, well-ventilated place.
Storage Code: Green - general chemical storage

Safety Data Sheet

Section 8

Protection Information

<u>Chemical Name</u>	<u>(TWA)</u>	<u>ACGIH</u>	<u>(STEL)</u>	<u>(TWA)</u>	<u>OSHA PEL</u>	<u>(STEL)</u>
No data available	N/A		N/A	N/A		N/A

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

No special requirements under normal industrial use.

Skin Protection:

Not normally considered a skin hazard. Where use can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9

Physical Data

Formula: See Section 3

Molecular Weight:

Appearance: Solid

Odor: No data available

Odor Threshold: No data available

pH: No data available

Melting Point: No data available

Boiling Point: No data available

Flash Point: No data available

Flammable Limits in Air: No data available

Vapor Pressure: No data available

Evaporation Rate (BuAc=1): No data available

Vapor Density (Air=1): No data available

Specific Gravity: No data available

Solubility in Water: No data available

Log Pow (calculated): No data available

Autoignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: No data available

Percent Volatile by Volume: No data available

Section 10

Reactivity Data

Reactivity:

No data available

Chemical Stability:

Stable under normal conditions.

Conditions to Avoid:

None known.

Hazardous Polymerization:

Will not occur

Section 11

Toxicity Data

Symptoms (Acute): No data available

Delayed Effects: No data available

Acute Toxicity:

Chemical Name

Phenylthiourea

CAS Number

103-85-5

Oral LD50

Oral LD50 Rat 3

mg/kg

Oral LD50 Mouse

10 mg/kg

Oral LD50 Rabbit

40 mg/kg

Dermal LD50

Inhalation LC50

Carcinogenicity:

Chemical Name

No data available

CAS Number

IARC

Not listed

NTP

Not listed

OSHA

Not listed

Chronic Effects:

Mutagenicity:

No evidence of a mutagenic effect.

Safety Data Sheet

Teratogenicity: No evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: No evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2, Respiratory system, Skin
Chronic: No data available

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: No data
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

Chemical Name	CAS Number	Eco Toxicity
Phenylthiourea	103-85-5	Aquatic LC50 (48h) Daphnia = 59 MG/L

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: Not regulated for transport by US DOT.	Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.
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Section 15

Regulatory Information

TSCA Status: All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Phenylthiourea	103-85-5	No	No	No	No	No

Section 16

Additional Information

Revised: 09/12/2014

Replaces: 09/03/2014

Printed: 09-12-2014

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 716.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Carbonate (Washing soda)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium carbonate, anhydrous	497-19-8	Na ₂ CO ₃	105.99	
Synonym: Soda ash				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water. **If skin irritation occurs:** Get medical advice or attention (P332+P313).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Hygroscopic. Keep container tightly closed. Store in Flinn Chem-Saf™ bag. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.

Melting point: 856 °C

Soluble: Water and glycerol. Insoluble in alcohol.

Specific gravity: 2.54

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, aluminum. Reacts vigorously with fluorine.

Shelf life: Fair, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant

ORL-RAT LD₅₀: 4090 mg/kg

Chronic effects: N.A.

IHL-RAT LC₅₀: 2300 mg/m³ 2 Hour

Target organs: Investigated as a mutagen.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

LC₅₀ 96 Hr *Lepomis macrochirus*: 300 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (207-838-8).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 721.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Chloride (Rock Salt, Sea Salt, Table Salt)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium chloride	7647-14-5	NaCl	58.45	
Synonym: Table salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If skin irritation occurs: Get medical advice or attention (P332+P313).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Somewhat hygroscopic. Keep container tightly closed. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Odorless.
Soluble: Water. Slightly in alcohol.

Boiling point: 1465 °C
Melting point: 801 °C
Specific gravity: 2.17
Not for human use.

SECTION 10 — STABILITY AND REACTIVITY

Reacts violently with bromine trifluoride and lithium. Avoid contact with strong oxidizers, acids, bromine.
Shelf life: Fair, somewhat hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, dehydration.
Chronic effects: N.A.
Target organs: Investigated as a mutagen, reproductive effector.

ORL-RAT LD₅₀: 3000 mg/kg
IHL-RAT LC₅₀: >42 g/m³ 1Hr
SKN-RBT LD₅₀: >10 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-598-3).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: SPIRULINA

CAS number: 724424-92-4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: PC21: Laboratory chemicals.

1.3. Details of the supplier of the safety data sheet

Company name: Elemental Microanalysis Ltd
1 Hameldown Road Okehampton
Okehampton
Devon
EX20 1UB
United Kingdom
Tel: 44(0)183754446
Fax: 44(0)183754544
Email: info@microanalysis.co.uk

1.4. Emergency telephone number

Emergency tel: +44 (0) 7990 767375 (24 hours)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: SPIRULINA.

CAS number: 724424-92-4

Section 4: First aid measures

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4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water.

Inhalation: Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Wash the spillage site with large amounts of water.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid the formation or spread of dust in the air.

[cont...]

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Respiratory protection: Respiratory protective device with particle filter.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Powder

Colour: Green

Odour: Characteristic odour

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: No data available.

Boiling point/range°C: No data available.

Flammability limits %: lower: No data available.

Flash point°C: No data available.

Autoflammability°C: No data available.

Relative density: No data available.

VOC g/l: No data available.

Melting point/range°C: No data available.

upper: No data available.

Part.coeff. n-octanol/water: No data available.

Vapour pressure: No data available.

pH: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

[cont...]

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10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

[cont...]

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Section 13: Disposal considerations

13.1. Waste treatment methods

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

This safety data sheet is prepared in accordance with Commission Regulation (EC) No 1272/2008.

* indicates text in the SDS which has changed since the last revision.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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SYMBOL:

Not applicable

PRECAUTIONARY STATEMENTS:

Not applicable

2.3. OTHER HAZARDS

FIRE AND EXPLOSION HAZARD:

May form combustible dust concentrations in air. Possibility of dust explosion, it is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions. Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Keep away from all ignition sources including heat, sparks and flame.

POTENTIAL ACUTE HEALTH EFFECTS FROM OCCUPATIONAL EXPOSURE:

Inhalation: Exposure to high airborne concentrations may cause mild respiratory irritation due to drying effects of dust.

Skin contact: Sustained exposure in a dusty manufacturing environment may result in mechanical irritation in the creases of the skin, particularly at the fingers.

No health effects known or anticipated.

Eye contact: May cause slight mechanical irritation from acute exposure.

Ingestion: No effects known or anticipated.

SECTION 3: COMPOSITION/INFORMATION OF INGREDIENTS

- Chemical name	Sucralose; 4,1,6-trichloro-galacto-sucrose
- CAS number	56038-13-2
- EINECS number	259-952-2

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

- General advise	Seek medical attention if irritation develops after first aid application
- Inhalation	Move people from the exposure to fresh air.
- Skin contact	Wash skin with soap and water.
- Eye contact	Remove particulates by irrigating with eye wash solution or clean water, holding eyelids apart.
- Ingestion	Wash mouth and flush throat upto the stomach.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

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None Anticipated

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED.

None Anticipated

SECTION 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Water spray, dry powder, carbon dioxide or media appropriate for surrounding fire. Use of water jet may cause explosive dust conditions.

5.2 SPECIFIC HAZARDS

FIRE AND EXPLOSION HAZARD: Possibility of dust explosion. It is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions. Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Use of water jet may cause explosive dust conditions.

SEE NFPA 61, Standard for the prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 or later Edition, and other related standards.

Minimum spark ignition energy: 0.40 Joules minimum ignition temperature: 390°C(734°F). Minimum explosion concentration for dust: 165g/M3 (0.165 oz/Ft3)(similar to a dense fog)

5.3 SPECIFIC PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Wear self-contained breathing apparatus and full protective gear. Use water spray to cool fire exposed containers.

FLAMMABILITY CLASS (OSHA)

Not applicable

HAZARDOUS COMBUSTION PRODUCTS

Carbon dioxide and carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS

None under normal conditions. Avoid prolonged inhalation of dust.

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6.2 ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage if safe to do so. No special environmental precautions required

6.3 METHODS FOR CLEANING UP

Vacuum or sweep spills. Minimize dust generation.

If washing down spilled area is necessary, use copious amounts of water and control runoff. Follow local, state and federal regulations for product disposal

6.4 REFERENCE TO OTHER SECTIONS

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment

See Section 13 for disposal information

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

See NFPA 61, Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and other related standards. Use with adequate ventilation. Minimize dust generation and accumulation; dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are disturbed.

All dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions and may require explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Bonding and grounding systems may be required.

Dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) should be designed to limit or prevent leakage of dust into the work area.

Do not allow dust to accumulate on flat surfaces, on rafters or building structural components. Routine housekeeping should be instituted to reduce dust accumulation. Use Avoid dispersal of dust in the air; use vacuum or wet sweeping methods. Do not use compressed air to clean surfaces.

Keep away from all ignition sources including heat, sparks, and flame. Where dust accumulations occur use non-sparking tools.

7.2 CONDITIONS OF SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

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Store in a cool dry place. Store in a tightly closed container/bag.
The packaging material should have reasonable moisture and air barriers and comply with food regulations.

7.3 SPECIFIC END USE(S)
Not applicable

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure limits: Nuisance dust (also called particulate not otherwise regulated (PNOR)).

OSHA PEL: 15 mg/ mg/m³ Total dust
5 mg/m³ Respirable dust

ACGIH TLV: 10 mg/m³ Inhalable dust
5 mg/m³ Respirable dust
15 mg/m³ Total dust

8.2 EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS:

Ventilation: See NFPA 61, Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and National Fire Protection Association 650, Standard for Pneumatic Conveying Systems for Handling Combustible Materials, 1997 Edition and other related standards. Normal industrial hygiene measures should be sufficient for protection of employees from exposure to dusts. Local and mechanical exhaust is desirable when dumping bags.

APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT:

Eye protection: Safety glasses are recommended. Safety goggles are desirable when dumping bags.

Emergency wash facilities: Eye wash is recommended for conditions where dust generation is likely.

Special protective clothing: Not normally required.

Gloves: Not normally required. Use ordinary work gloves if dust dries skin.

Respirator: NIOSH approved N-95 dust respirator if working in situations that could generate large amounts of airborne dust.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS:

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See section 5.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

- Physical form	Powder
- Color	White to off-white
- Odor	Practically odorless
- pH (concentration)	Neutral in aqueous solution
- Boiling point	130°C(266°F)with decomposition
- Flash point	No data
- Melting/freezing point	No data
- Decomposition temperature	No data
- Auto-ignition temperature	No data
- Explosion properties	No data
- Oxidising properties	No data
- Vapour pressure	<1 mmHg
- Vapor density	No data
- Relative density	No data
- Bulk density	No data
- Specific gravity	No data
- Viscosity	No data
- Water solubility	Complete 30% w/v at 25°C (77°F)
- Solubility (non aqueous)	No data
- Partition coefficient	No data
- Dissociation constant	No data
- Evaporation rate	No data

9.2 OTHER INFORMATION

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Sucralose, when heated at elevated temperatures, may break down with the release of carbon dioxide, carbon monoxide and minor amounts of hydrogen chloride.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

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Not applicable

10.4 CONDITIONS TO AVOID

Practices which produce dust or disperse finely divided dust in air.
See NFPA 61. Standard for the Prevention of Fire and Dust Explosions in Agricultural and Food Processing Facilities, 2008 Edition, and other related standards.

10.5 INCOMPATIBLE MATERIALS

Oxidizing agents, strong acids

10.6 Hazardous decomposition products:

Nothing unusual

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- Inhalation Exposure to high airborne concentrations may cause mild respiratory irritation due to drying effects of dust.
ORAL: LD50 Oral rat LD50 > 10 g/kg; Oral mouse LD50 > 16 g/kg
- Ingestion No effects known or anticipated.
- Skin irritation / corrosion Sustained exposure in a dusty manufacturing environment may result in mechanical irritation in the creases of the skin, particularly at the fingers, or other drying effects. no health effects known or anticipated.
- Eye irritation May cause slight mechanical irritation from acute exposure.
- Skin sensitisation Not sensitizing
- Chronic toxicity Not known or anticipated
- Genetic toxicity Not known or anticipated
- Carcinogenicity Not classifiable as Carcinogen.
- Reprotoxicity Not known or anticipated
- Specific effects Not applicable

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY

Sucralose and its breakdown products are not known to be toxic to plant and animal life.

12.2 PERSISTENCE/DEGRADABILITY

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Readily biodegradable

12.3 BIOACCUMULATIVE POTENTIAL

Sucralose and its breakdown products are not fat-soluble, and do not accumulate in plant or animal tissue.

12.4 MOBILITY IN SOIL

Not applicable

12.5 BPT, vPvB

The substance does not meet the criteria for PBT or vPvB.

12.6 OTHER ADVERSE EFFECTS

None known

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Follow local, state and federal regulations for product disposal. Not a hazardous waste unless contaminated with hazardous products.

SECTION 14: TRANSPORTATION INFORMATION

International regulations (RID/ADR; RTMDR; IMDG; IATA/OACI): Not classified as dangerous for transport.

DOT shipping label: Non-hazardous

SECTION 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

According with the version of the Globally Harmonized System of Classification and labeling adopted in the United States and Regulation 1272/2008/EC(CLP): Not classified

15.2 CHEMICAL SAFETY ASSESSMENT

US FEDERAL REGULATIONS:

Clean Air Act:

ODS: Not applicable.

SARA (EPCRA) Section 313 (40 C.F.R. § 372.65): Not applicable.

TSCA Status: On TSCA inventory.

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STATE REPORTING REQUIREMENTS:
California Proposition 65: Not applicable.

SECTION 16: OTHER INFORMATION

See Hazard Communication Guidance for Combustible Dusts, OSHA 3371-08 2009, U.S. Occupational Safety and Health Administration, <https://www.osha.gov/Publications/3371combustible-dust.html> (accessed 10/8/14)

NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for general safe handling and design guidance.

Safety Data Sheet according to Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

DISCLAIMER OF LIABILITY

The information in this SDS is collected from reliable sources. However, the information is provided without any warranty, expressed or implied. The conditions or methods of handling, storage, use or disposal of the product might be beyond our control and knowledge. For the avoidance of doubt, we shall in no such circumstances be under any liability in respect of loss, damage or expenses arising from handling, storage, use or disposal of the product by your company and/or your subcontractors. This SDS is only applicable for the product mentioned in the identification chapter and title. If the product is used as a component in another product, this SDS may not be applicable on the composite material.

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SAFETY DATA SHEET

WHITE SUGARS (CRYSTALLINE)

Infosafe No.: 8AC2S
Version No.: 1.0
ISSUED Date: 08/01/2015
ISSUED BY Sugar Australia Pty
Limited

1. IDENTIFICATION

GHS Product Identifier

WHITE SUGARS (CRYSTALLINE)

Product Code**Company Name**

Sugar Australia Pty Limited (ABN 82 081 245 169)

Address

265 Whitehall St Yarraville
VIC 3013 Australia

Telephone/Fax Number

Tel: +61 3 9283 4558

Fax: +61 3 9689 4085

(24 hour a day available)

Emergency Phone Number: Poisons Information Centre 13 11 26

Recommended use of the chemical and restrictions on use

As a sweetener or ingredient in food processing and food preparation.

Other Names

Name	Product Code
SUCROSE	
SUGAR	
REFINED SUGAR	
CASTER SUGAR	
CSR JAM SETTING SUGAR	
CSR SMART	
AGAVE SUGAR	

Other Information

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with the Code and guidelines from the Australian Safety and Compensation Council (ASCC, formerly National Occupational Health and Safety Commission - NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in ASCC standards, guidelines, or regulations and/or a material change in product specifications.

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Other Information

This product is a well known ingredient in food and beverages and this Safety Data Sheet is concerned only with occupational exposures.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Name	CAS	Proportion
Sucrose	57-50-1	90-100 %
Non hazardous additives		0-10 %

4. FIRST-AID MEASURES

Inhalation

Not considered a potential route of exposure. However, if inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion

Unlikely to cause adverse effects. If ingested in large amounts and symptoms develop seek medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically. People with diabetes may need stabilisation.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water, dry chemical, carbon dioxide and foam.

Hazards from Combustion Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific Hazards Arising From The Chemical

Airborne sugar dust can explode under certain conditions of temperature and humidity and in the presence of an ignition source when the concentration exceeds 25 grams per cubic metre. Intrinsically safe dust extraction systems, cleaning procedures, electrical earthing and other safety measures must be used to avoid the risk of explosion.

Decomposition Temperature

Not available

Precautions in connection with Fire

Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Remove all sources of ignition. Increase ventilation. Evacuate all unprotected personnel. Do not breathe dust. Wear respiratory protection and full protective clothing to minimise exposure. Sweep up material avoiding dust generation - dampen spilled material with water if suitable to avoid airborne dust, OR where possible use dustless methods such as vacuum to collect the material; then transfer material in to suitable vapour tight labelled containers for subsequent recycling or disposal. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Material can ferment if excessive moisture contamination is allowed. Fermentation can yield carbon dioxide with possible traces of ethanol or volatile fatty acids (e.g. acetic, propionic, lactic, or butyric) and if exposed to a spark or flame may result in an explosion. These conditions should be avoided. Airborne sugar dust can explode under certain conditions. Refer to Section 5: Fire Fighting Measures: Specific hazards. If maintenance of a storage bin / vessel requires entry by personnel, confined space precautions should be complied with. Insufficient oxygen may be present in vessels containing the product due to the generation of gases during fermentation.

Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Avoid inhalation of dust, and skin or eye contact. Establish good housekeeping practices. Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds. Maintain high standards of personal hygiene ie. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities

This product should be stored in its factory packaging in a cool, dry, well ventilated area, away from sources of ignition, oxidising agents and out of moisture. Keep containers closed when not in use.

Other Information

For further information refer to Sugar Australia's "Granulated White Sugar Storage and Handling in Bulk", Sugar Australia's "Explosion Risk Management and Housekeeping Standards for Sugar" and Sugar Australia's "Granulated and Powdered White Sugar Storage and Handling in Flexible Intermediate Bulk Containers (FIBC)".

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for this material, however, the TWA exposure standards for dust not otherwise specified is 10 mg/m³. As with all chemicals, exposure should be kept to the lowest possible levels. TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. Source: Safe Work Australia

Biological Limit Values

No biological limits allocated.

Appropriate Engineering Controls

Use with good general ventilation.

Respiratory Protection

Generally not required.

Industrial applications: If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.

Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection

Not required under normal conditions of use. However, avoid eye contact.

Industrial Applications: Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations.

Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Not required under normal conditions of use.

Industrial Applications: Wear gloves of impervious material (such as PVC coated fabric). Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.

Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Industrial applications: Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Solid

Appearance

Crystalline solid

Colour

White

Physical and chemical properties

Physical and Chemical Properties given below relate to Crystalline Sugar (Sucrose).

Odour

Sweet odour

Decomposition Temperature

Not available

Melting Point

160-186°C

Boiling Point

Decomposes with heat

Solubility in Water

2 kg per litre

Specific Gravity

1.59

pH

Not available

Vapour Pressure

Not applicable

Vapour Density (Air=1)

Not applicable

Evaporation Rate

Not applicable

Odour Threshold

Not available

Viscosity

Not applicable

Partition Coefficient: n-octanol/water

Not available

Flash Point

Not applicable

Flammability

Combustible

Auto-Ignition Temperature

500°C

Flammable Limits - Lower

25-45 g/m³

Flammable Limits - Upper

Not available

Molecular Weight

342

Other Information

For further information refer to Sugar Australia's "White Sugar Properties".

10. STABILITY AND REACTIVITY

Reactivity

Reacts with incompatible materials.

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Heat, open flames and other sources of ignition.

Incompatible materials

Incompatible with oxidising agents.

Hazardous Decomposition Products

Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen. Ethanol or volatile fatty acids (e.g. acetic, propionic, lactic, or butyric) if fermentation occurs.

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity - Oral

Non-toxic - a foodstuff

Sucrose: LD50 (rat): 29,700 mg/kg

Ingestion

No health effects under normal conditions of industrial use, but ingestion may destabilise people with diabetes.

Inhalation

Inhalation of dusts may irritate the respiratory system. Repeated exposure to the powder and dust may result in increased nasal and respiratory secretions and coughing, but not irreversible health effects.

Skin

Skin contact may cause mechanical irritation resulting in redness and itching. Repeated skin contact may cause dermatitis.

Eye

May be irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Non-toxic to aquatic and terrestrial organisms. Sucrose is an oxygen depleting substance in aquatic environments.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Environmental Protection

Prevent this material entering waterways, drains and sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

Product can be treated as a common waste for disposal to an organic recycler or into a landfill site in accordance with relevant Authority guidelines. Note Biochemical Oxygen Demand load of sugar solutions in waste water streams.

Return product to supplier for reuse / recycling if possible. Consult supplier for recycling options. Recycle containers if possible, or dispose of in an authorised landfill. Transportation of wet sugar waste may require Waste Transport Certification.

The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information

Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number

None Allocated

UN proper shipping name

None Allocated

Transport hazard class(es)

None Allocated

IMDG Marine pollutant

No

15. REGULATORY INFORMATION

Regulatory information

Not classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule

Not Scheduled

Australia (AICS)

All components of this product are listed on the Inventory or exempted.

16. OTHER INFORMATION

Date of preparation or last revision of SDS

SDS Reviewed: January 2015

Supersedes: February 2010

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants, Safe work Australia.

American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

Contact Person/Point

Emergency Contact Number: Poisons Information Centre 13 11 26

For further information on this product, please contact the following:

Sugar Australia Pty Limited

ABN 82 081 245 169

265 Whitehall St Yarraville VIC 3013 Australia

Telephone: 61 3 9283 4558

Facsimile: 61 3 9689 4085

Other Information

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END OF SDS

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Revision Number: 001.0

Issue date: 09/03/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	Loctite® Super Glue Gel No Mess	IDH number:	235495
Product type:	Cyanoacrylate	Item number:	82196
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (800) 624-7767		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY		
Rocky Hill, Connecticut 06067	Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: BONDS SKIN IN SECONDS.
COMBUSTIBLE LIQUID.
CAUSES EYE IRRITATION.
MAY CAUSE RESPIRATORY IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	4
EYE IRRITATION	2B
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention:	Keep away from heat, sparks, open flames, hot surfaces - no smoking. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.
Response:	Wear protective gloves, eye protection, and face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If eye irritation persists: Get medical attention. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Ethyl 2-cyanoacrylate	7085-85-0	60 - 100
Filler	Proprietary	5 - 10
Thickener	Proprietary	5 - 10

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
Skin contact:	Do not pull bonded skin apart. Soak in warm soapy water. Gently peel apart using a blunt instrument. If skin is burned due to the rapid generation of heat by a large drop, seek medical attention. If lips are bonded, apply warm water to the lips and encourage wetting and pressure from saliva in mouth. Peel or roll lips apart. Do not pull lips apart with direct opposing force.
Eye contact:	Immediately flush with plenty of water for at least 15 minutes. Get medical attention. If eyelids are bonded closed, release eyelashes with warm water by covering with a wet pad. Do not force eye open. Cyanoacrylate will bond to eye protein and will cause a lachrymatory effect which will help to debond the adhesive. Keep eye covered until debonding is complete, usually within 1-3 days. Medical attention should be sought in case solid particles of polymerized cyanoacrylate trapped behind the eyelid caused abrasive damage.
Ingestion:	Ensure breathing passages are not obstructed. The product will polymerize rapidly and bond to the mouth making it almost impossible to swallow. Saliva will separate any solidified product in several hours. Prevent the patient from swallowing any separated mass.
Symptoms:	See Section 11.
Notes to physician:	Surgery is not necessary to separate accidentally bonded tissues. Experience has shown that bonded tissues are best treated by passive, non-surgical first aid. If rapid curing has caused thermal burns they should be treated symptomatically after adhesive is removed.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear a self-contained breathing apparatus with a full face piece operated in pressure-demand or other positive pressure mode.
Unusual fire or explosion hazards:	None
Hazardous combustion products:	Oxides of carbon. Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Ventilate area. Do not allow product to enter sewer or waterways.
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Clean-up methods:

Do not use cloths for mopping up. Flood with water to complete polymerization and scrape off the floor. Cured material can be disposed of as non-hazardous waste. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:

Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Avoid contact with fabric or paper goods. Contact with these materials may cause rapid polymerization which can generate smoke and strong irritating vapors, and cause thermal burns.

Storage:

Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Ethyl 2-cyanoacrylate	0.2 ppm TWA	None	None	None
Filler	10 mg/m ³ TWA Inhalable dust. 3 mg/m ³ TWA Respirable fraction.	15 mg/m ³ TWA Total dust. 5 mg/m ³ TWA Respirable fraction.	None	None
Thickener	None	None	None	None

Engineering controls:

Use positive down-draft exhaust ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Skin protection:

Use nitrile gloves and aprons as necessary to prevent contact. Do not use PVC, nylon or cotton.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Gel, Liquid
Color:	Colorless
Odor:	Irritating
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	> 100 °C (> 212°F) None
Melting point/ range:	Not available.
Vapor density:	Not available.
Flash point:	80 - 93 °C (176°F - 199.4 °F)
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	Not available.
Solubility in water:	Polymerises in presence of water.
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 2 %; < 20 g/l (California SCAQMD Method 316B) (Estimated)
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under recommended storage conditions.
Hazardous reactions:	Rapid exothermic polymerization will occur in the presence of water, amines, alkalis and alcohols.
Hazardous decomposition products:	Oxides of carbon. Irritating and toxic gases or fumes may be released during a fire.
Incompatible materials:	Water, amines, alkalis and alcohols.
Reactivity:	Not available.
Conditions to avoid:	Spontaneous polymerization.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation:	May cause respiratory tract irritation. Exposure to vapors above the established exposure limit results in respiratory irritation, which may lead to difficulty in breathing and tightness in the chest.
Skin contact:	Bonds skin in seconds. May cause skin irritation. Cyanoacrylates have been reported to cause allergic reaction but due to rapid polymerization at the skin surface, an allergic response is rare. Cyanoacrylates generate heat on solidification. In rare circumstances a large drop will burn the skin. Cured adhesive does not present a health hazard even if bonded to the skin.
Eye contact:	Irritating to eyes. Causes excessive tearing. Eyelids may bond.
Ingestion:	Not expected to be harmful by ingestion. Rapidly polymerizes (solidifies) and bonds in mouth. It is almost impossible to swallow.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Ethyl 2-cyanoacrylate	None	Irritant, Allergen, Respiratory
Filler	None	Irritant
Thickener	None	Irritant

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Ethyl 2-cyanoacrylate	No	No	No
Filler	No	No	No
Thickener	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Combustible liquid, n.o.s. (Cyanoacrylate ester)
Hazard class or division: Combustible Liquid
Identification number: NA 1993
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Aviation regulated liquid, n.o.s. (Cyanoacrylate ester)
Hazard class or division: 9
Identification number: UN 3334
Packing group: III
Exceptions: Primary packs containing less than 500ml are unregulated by this mode of transport and may be shipped unrestricted.

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire, Reactive
CERCLA/SARA Section 313: None above reporting de minimis
California Proposition 65: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Catherine Bimler, Regulatory Affairs Specialist
Issue date: 09/03/2014

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Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

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Steel Wool, NO# 00

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Steel Wool, NO# 00

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25586

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture: None

Hazard statements: None

Precautionary statements:

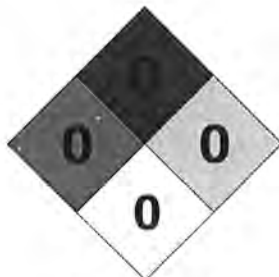
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

None

WHMIS

NFPA/HMIS



NFPA SCALE (0-4)

Health	0
Flammability	0
Physical Hazard	0
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

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Steel Wool, NO# 00

CAS N/A	Steel, shot and wool	100 %
Percentages are by weight		

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation, Nausea, Headache, Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions):

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Use spark-proof tools and explosion-proof equipment. Ensure that air-handling

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Steel Wool, NO# 00

systems are operational. Ensure adequate ventilation.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Should not be released into environment.

Methods and material for containment and cleaning up:

Keep in suitable closed containers for disposal. Always obey local regulations. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect solids in powder form using vacuum with (HEPA filter). Evacuate personnel to safe areas.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Minimize dust generation and accumulation. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities:

Store away from incompatible materials. Protect from freezing and physical damage. Keep away from food and beverages. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store in cool, dry conditions in well sealed containers. Store with like hazards.

SECTION 8: Exposure controls/personal protection



Control Parameters:

, , OSHA PEL TWA (Total Dust) 15 mg/m³ (50 mppcf*).
, , ACGIH TLV TWA (inhalable particles) 10 mg/m³.

Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use under a fume hood.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

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Steel Wool, NO# 00

- Protection of skin:** Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.
- Eye protection:** Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.
- General hygienic measures:** Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Grey Solid	Explosion limit lower: Explosion limit upper:	Not determined Not determined
Odor:	Not Determined	Vapor pressure:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not Determined	Relative density:	Not determined
Melting/Freezing point:	1371-1483°C	Solubilities:	None
Boiling point/Boiling range:	2850-3150°C	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid,gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not determined
Density: Not determined			

SECTION 10: Stability and reactivity

- Reactivity:**
Nonreactive under normal conditions.
- Chemical stability:**
Stable under normal conditions.
- Possible hazardous reactions:**
None under normal processing.
- Conditions to avoid:**
Incompatible Materials.

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Steel Wool, NO# 00

Incompatible materials:

Strong acids. Strong bases. Oxidizing agents.

Hazardous decomposition products: None

SECTION 11: Toxicological information

Acute Toxicity: No additional information.

Chronic Toxicity: No additional information.

Corrosion Irritation: No additional information.

Sensitization: No additional information.

Single Target Organ (STOT): No additional information.

Numerical Measures: No additional information.

Carcinogenicity: No additional information.

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

: No information available.

Persistence and degradability:

No information available.

Bioaccumulative potential:

No information available.

Mobility in soil:

No information available.

Other adverse effects:

No information available.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

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Steel Wool, NO# 00

SECTION 14: Transport information

UN-Number:

Not Regulated.

UN proper shipping name:

Not Regulated.

Transport hazard class(es): None

Packing group: Not Regulated

Environmental hazard: None

Transport in bulk: Not Applicable

Special precautions for user: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

SECTION 16: Other information

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Steel Wool, NO# 00

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.

Effective date: 10.24.2014

Last updated: 06.17.2015

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Effective date : 11.05.2014

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Corn Starch

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : Corn Starch

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25580

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

May form combustible dust concentrations in air.

Signal word :Warning

Hazard statements:

Precautionary statements:

Other Non-GHS Classification:

**WHMIS
NFPA/HMIS**

NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:

CAS 9005-25-8

Starch, Potato, Reagent Grade

>90 %

Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact: Wash hands and exposed skin with soap and plenty of water. Consult a physician.

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Corn Starch

After eye contact: Flush eyes with water as a precaution.

After swallowing: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Shortness of breath. Nausea.;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Carbon oxides may be released.

Advice for firefighters:

Protective equipment: Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid generating dust.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that dust-handling systems (exhaust ducts, dust collectors, vessels, and processing equipment) are designed to prevent the escape of dust into the work area.

Environmental precautions:

Prevent from reaching drains, sewer, or waterway. Should not be released into environment.

Methods and material for containment and cleaning up:

Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. Sweep up and shovel. Keep in suitable closed containers for disposal. Follow proper disposal methods. Refer to Section 13.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions refer to Section 2.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Store away from incompatible materials. Refer to Sections 5 and 10.

SECTION 8 : Exposure controls/personal protection



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Corn Starch

Control Parameters:	9005-25-8, High-polymeric carbohydrate material, 10 mg/m ³ USA. ACGIH Threshold Limit Values (TLV) 9005-25-8, High-polymeric carbohydrate material, 15 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants 9005-25-8, High-polymeric carbohydrate material, 5 mg/m ³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants 9005-25-8, High-polymeric carbohydrate material, 5 mg/m ³ USA. NIOSH Recommended Exposure Limits 9005-25-8, High-polymeric carbohydrate material, 10 mg/m ³ USA. NIOSH Recommended Exposure Limits
Appropriate Engineering controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Respiratory protection:	Normal ventilation is adequate. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles.
General hygienic measures:	Perform routine housekeeping to prevent dust generation. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash hands before breaks and immediately after handling the product.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	White solid	Explosion limit lower:	Not Available
		Explosion limit upper:	Not Available
Odor:	Not Available	Vapor pressure:	Not Available
Odor threshold:	Not Available	Vapor density:	Not Available
pH-value:	Not Available	Relative density:	Not Available
Melting/Freezing point:	Not Available	Solubilities:	
Boiling point/Boiling range:	Not Available	Partition coefficient (n-octanol/water):	Not Available
Flash point (closed cup):	Not Available	Auto/Self-ignition temperature:	Not Available
Evaporation rate:	Not Available	Decomposition temperature:	Not Available

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Corn Starch

Flammability (solid,gaseous):	May form combustible dust concentrations in air.	Viscosity:	a. Kinematic:Not Available b. Dynamic: Not Available
Density: Not Available			

SECTION 10 : Stability and reactivity

Reactivity:None under normal processing.

Chemical stability:Stable under normal conditions.

Possible hazardous reactions:

Conditions to avoid:Dust generation. Incompatible materials.

Incompatible materials:Strong oxidizing agents.

Hazardous decomposition products:

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	9005-25-8	LD50 Intraperitoneal - Mouse - 6,600 mg/kg
Chronic Toxicity: No additional information.		
Corrosion Irritation:		
Dermal:	9005-25-8	Skin - Human Result: Mild skin irritation - 3 h
Sensitization: No additional information.		
Single Target Organ (STOT): No additional information.		
Numerical Measures: No additional information.		
Carcinogenicity: No additional information.		
Mutagenicity: No additional information.		
Reproductive Toxicity: No additional information.		

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:

Bioaccumulative potential:

Mobility in soil:

Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

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Corn Starch

SECTION 14 : Transport information

UN-Number

Not Regulated

UN proper shipping name

Not Regulated

Transport hazard class(es)

Packing group:Not Regulated

Environmental hazard:

Transport in bulk:

Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous waste code):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

9005-25-8 Not Regulated.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

9005-25-8 Not Regulated.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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Corn Starch

GHS Full Text Phrases:

Abbreviations and acronyms:

Effective date : 11.05.2014

Last updated : 05.08.2015



Safety Data Sheet

Starch, Potato, Soluble, Powder, ACS

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Starch, Potato, Soluble, Powder, ACS

Synonyms/Generic Names: Starch

Product Number: 5525

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: No known OSHA hazards.

Target Organs: None

Signal Word: Warning

Pictograms: None

GHS Classification:

Skin irritation	Category 3
-----------------	------------

GHS Label Elements, including precautionary statements:

Hazard Statements:

H316	Causes mild skin irritation.
------	------------------------------

Precautionary Statements:

None

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	A

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
High-polymeric carbohydrate material derived from potatoes	100	9005-25-8	232-679-6	N/A	N/A

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool unopened containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	May emit toxic fumes (carbon oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Starch	10 mg/m ³	TLV	ACGIH
	15 mg/m ^{3*} 5 mg/m ^{3**}	PEL	OSHA
	10 mg/m ^{3*} 5 mg/m ^{3**}	REL	NIOSH

*Total Dust

**Respirable Fraction

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White solid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable

Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	1.5 (Water = 1)
Solubility (ies)	Insoluble in cold water, hot water.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Not Available
Incompatible Materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available
Other	LD50 Intraperitoneal - mouse - 6,600 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, itchiness.
Eyes	Irritation, redness.
Respiratory	Irritation, coughing.
Ingestion	Irritation, nausea.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	No SARA Hazards
SARA 312	No SARA Hazards
SARA 313	Not Listed
WHMIS Canada	Not Listed

16. OTHER INFORMATION

Revision	Date
Revision 1	08-27-2012

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.

T

Product Number: 807AC
Issuing Date: June 20, 2013

Revision Date: None

Product Name: Baby Powder
Revision Number: 0



VI-JON[®] Safety Data Sheet

for Health and Beauty Products

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Baby Powder *Talcum Powder*
Item Number: 807AC
Recommended Use: Body Powder
Supplier Address: Vi-Jon, Inc.
8515 Page Avenue
Saint Louis, MO 63114
General Information Contact: Phone: 314-427-1000 (M-F 8am-4pm CST)
Email: info@vijon.com

In Case of Spill Emergency Contact: Chemtrec: 1-800-424-9300 (24-Hour)

2. HAZARDS IDENTIFICATION FOR INDUSTRIAL SETTING

CAUTION!

Emergency Overview

Appearance: Very fine, Gray to white powder
Physical State: Powder
Odor: Baby perfume
May cause eye irritation

Potential Health Effects

Primary Routes of Exposure

Skin contact.

Acute Toxicity

Eyes

May cause irritation.

Skin

No known effect based on information supplied.

Inhalation

Inhalation of dust in high concentration may cause irritation of respiratory system.

Ingestion

Not an expected route of exposure. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

Prolonged or repeated inhalation may cause damage to the lungs.

Aggravated Medical Conditions

None known.

Environmental Hazard

See Section 12 for additional Ecological Information.

Product Number: 807AC
Issuing Date: June 20, 2013

Revision Date: None

Product Name: Baby Powder
Revision Number: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Talc (containing no asbestos)	14807-96-6	50-100
Fragrance	Fragrance	0-10

4. FIRST AID MEASURES

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin Contact	In the case of skin irritation or allergic reactions see a physician.
Inhalation	If symptoms persist, call a physician.
Ingestion	Rinse mouth. Drink plenty of water. Do NOT induce vomiting. If symptoms persist, call a physician.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Powdered material may form explosive dust-air mixtures.
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Uniform Fire Code	• COMBUSTIBLE DUST/POWDER
Hazardous Combustion Products	Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Health Hazard 0 Flammability 0 Stability 0 Physical and Chemical Hazards - None

6. ACCIDENTAL RELEASE MEASURES FOR INDUSTRIAL SETTING

Personal Precautions	Use personal protective equipment. Avoid contact with eyes. Avoid Inhalation.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	Avoid dust formation. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Clean contaminated surface thoroughly. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE FOR INDUSTRIAL SETTING

Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes. Avoid inhalation. Avoid dust formation.
Storage	Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION FOR INDUSTRIAL SETTING

Exposure Guidelines There is no exposure data pertaining to the Product. This section reflects exposure data pertaining to individual ingredients.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Talc (containing no asbestos) 14807-96-6	TWA: 2 mg/m ³	(vacated) TWA: 2 mg/m ³	IDLH: 1000 mg/m ³ containg no asbestos and <1% quartz TWA: 2 mg/m ³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures
 Showers
 Eyewash stations
 Ventilation systems

Personal Protective Equipment

Eye/Face Protection No special protective equipment required.
Skin and Body Protection No special protective equipment required.
Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Very fine, Gray to white powder	Odor	Baby perfume
Odor Threshold	No information available	Physical State	Powder
pH	N/A	Autoignition Temperature	No information available
Flash Point	No information available	Boiling Point/Range	No information available
Decomposition Temperature	No information available	Explosion Limits	No information available
Melting Point/Range	No information available	Solubility	No information available
Flammability Limits in Air	No information available	Vapor Pressure	No data available
Water Solubility	Insoluble	Partition Coefficient: n-octanol/water	N/A
Evaporation Rate	No information available		
Vapor Density	No data available		

10. STABILITY AND REACTIVITY FOR INDUSTRIAL SETTING

Stability Stable under recommended storage conditions.

Incompatible Products None known.

Conditions to Avoid Dust formation.

When used in accordance with the directions.

Hazardous Decomposition Products Carbon oxides.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION FOR INDUSTRIAL SETTING

There is no data for this product. The information included in this section describes the potential hazards of the individual ingredients.

Acute Toxicity

Product Information Product does not present an acute toxicity hazard.

Chronic Toxicity

Chronic Toxicity Prolonged or repeated inhalation may cause damage to the lungs.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Talc (containing no asbestos)		Group 3		

IARC: (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION FOR INDUSTRIAL SETTING

There is no ecological data on the Product. The Product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices.

13. DISPOSAL CONSIDERATIONS FOR INDUSTRIAL SETTING

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of in accordance with local regulations.

California Hazardous Waste Codes 181

This product does not contain any substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT Not regulated
TDG Not regulated
MEX Not regulated
ICAO Not regulated
IATA Not regulated
IMDG/IMO Not regulated

Product Number: 807AC
Issuing Date: June 20, 2013

Revision Date: None

Product Name: Baby Powder
Revision Number: 0

15. REGULATORY INFORMATION FOR INDUSTRIAL SETTING

There is no data for this product. The information included in this section describes the potential hazards of the individual ingredients.

International Inventories

TSCA Exempt
DSL Not determined

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any ingredients which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any ingredients which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act.

CERCLA

This material, as supplied, does not contain any ingredients regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65 - None

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations For Industrial Setting

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Talc (containing no asbestos)	X	X	X		

International Regulations

Mexico - Grade Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Talc (containing no asbestos)		Mexico: TWA= 2 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Non-controlled

Product Number: 807AC
Issuing Date: June 20, 2013

Revision Date: None

Product Name: Baby Powder
Revision Number: 0

16. OTHER INFORMATION

Prepared By	WERCS Professional Services, LLC 23 British American Blvd. Latham, NY 12110 1-800-572-6501
Issuing Date	June 20, 2013
Revision Date	None
Revision Note	None

General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

Approved and Updated by Vi-Jon, Inc.

Disclaimer:

The information and recommendations contained in the Material Safety Data Sheet (MSDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

Vi-Jon, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Vi-Jon be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information.

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End of Safety Data Sheet

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 822.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Tin (metal strip)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Tin	7440-31-5	Sn	118.69	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Rinse with water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Finely divided metal may be combustible.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.
Exposure guidelines: PEL/TLV 2 mg/m³ (OSHA/ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Silver-white, ductile solid. Forms: granular, mossy, shot, and foil.	Boiling point: 2507 °C
Odorless.	Melting point: 232 °C
Soluble: Acids and hot potassium hydroxide solution. Insoluble in water.	Specific gravity: 7.310

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, sulfur, strong bases, halogens.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.	ORL-RAT LD ₅₀ : N.A.
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: N.A.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #27a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-141-8), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

Safety Data Sheet



according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS


Revision: B, 03/15/2015

1 Identification of the substance/mixture and of the company/undertaking


- **1.1 Product identifier**
- **Trade name:** Spirit Liquid Fill, Partial Immersion Thermometer
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Product Component
- **1.3 Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Lethan Corporation
1524 Bender Ave., #A102
Hamilton, OH 45011
(513) 783-5673
- **1.4 Emergency telephone number:**
ChemTel, Inc.
(800)255-3924, +1(813)248-0585

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  flame
Flam. Liq. 2 H225 Highly flammable liquid and vapour.
- 
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 Xi; Irritant

R36: Irritating to eyes.

 F; Highly flammable

R11: Highly flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

(Contd. on page 2)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 1)

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02 GHS07

Signal word Danger

Hazard-determining components of labelling:

acetone

Hazard statements

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P280 Wear protective gloves / eye protection.

P261 Avoid breathing mist/vapours/spray.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370+P378 In case of fire: Use for extinction: CO₂, powder or water spray.

P403+P235 Store in a well-ventilated place. Keep cool.

Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

Hazard description:

WHMIS-symbols:

B2 - Flammable liquid

D2B - Toxic material causing other toxic effects



NFPA ratings (scale 0 - 4)



Health = 2

Fire = 3

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *2

Fire = 3

Reactivity = 0

(Contd. on page 3)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 2)

· HMIS Long Term Health Hazard Substances

None of the ingredients is listed.

· 2.3 Other hazards**· Results of PBT and vPvB assessment**

- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients**· 3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 67-64-1	acetone	50-100%
EINECS: 200-662-2	☒ Xi R36; ☒ F R11	
Index number: 606-001-00-8	R66-67	
	⚠ Flam. Liq. 2, H225	
	⚠ Eye Irrit. 2, H319; STOT SE 3, H336	

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures**· 4.1 Description of first aid measures****· General information:**

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· 4.2 Most important symptoms and effects, both acute and delayed

Irritant to eyes.

Slight irritant effect on skin and mucous membranes.

Dizziness

Nausea

Gastric or intestinal disorders when ingested.

Coughing

Acidosis

Disorientation

Unconsciousness

(Contd. on page 4)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

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- **Hazards** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
If necessary oxygen respiration treatment.
Medical supervision for at least 48 hours.

5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
- **Additional information**
Eliminate all ignition sources if safe to do so.
Cool endangered receptacles with water spray.
Use large quantities of foam as it is partially destroyed by the product.

6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Protect from heat.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.

(Contd. on page 5)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 4)

Keep away from heat and direct sunlight.

Rags, metal wools / cuttings / shavings and waste papers soaked with product must be placed in a sealed metal container rated for flammable waste.

Avoid splashes or spray in enclosed areas.

- **Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

When heated the product forms flammable fumes.

Flammable gas-air mixtures may form in empty receptacles.

- **7.2 Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Provide ventilation for receptacles.

Avoid storage near extreme heat, ignition sources or open flame.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Do not store together with oxidizing and acidic materials.

- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

67-64-1 acetone

IOELV (EU)	Long-term value: 1210 mg/m ³ , 500 ppm
PEL (USA)	Long-term value: 2400 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 590 mg/m ³ , 250 ppm
TLV (USA)	Short-term value: (1782) NIC-1187 mg/m ³ , (750) NIC-500 ppm Long-term value: (1188) NIC-475 mg/m ³ , (500) NIC-200 ppm BEI
EL (Canada)	Short-term value: 500 ppm Long-term value: 250 ppm
EV (Canada)	Short-term value: 750 ppm Long-term value: 500 ppm

- **DNELs** No further relevant information available.

- **PNECs** No further relevant information available.

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Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

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· **Ingredients with biological limit values:**

67-64-1 acetone

BEI (USA)	50 mg/L
	Medium: urine
	Time: end of shift
	Parameter: Acetone (nonspecific)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid close or long term contact with the skin.

Avoid contact with the eyes.

· **Respiratory protection:**

Not required under normal conditions of use.

Use suitable respiratory protective device in case of insufficient ventilation.

Use suitable respiratory protective device when aerosol or mist is formed.

For spills, respiratory protection may be advisable.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· **Material of gloves**

Butyl rubber, BR

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Not suitable are gloves made of the following materials:**

Nitrile rubber, NBR

PVC gloves

PVA gloves

(Contd. on page 7)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 6)

· Eye protection:



Safety glasses

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment**
No further relevant information available.
- **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Colour:	Red
· Odour:	Acetone-like
· Odour threshold:	Not determined.
· pH-value:	Not determined.

· Change in condition

Melting point/Melting range:	Not Determined.
Boiling point/Boiling range:	131 °F / 55 °C

· Flash point:	-4 °F / -20 °C
· Flammability (solid, gaseous):	Not applicable.
· Auto/Self-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Self-igniting:	Product is not self-igniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Explosion limits:	
Lower:	2,6 Vol %
Upper:	13 Vol %
· Vapour pressure:	Not determined.
· Density at 20 °C:	0,8 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

(Contd. on page 8)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 7)

- **Solubility in / Miscibility with water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
 - Dynamic:** Not determined.
 - Kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Flammable.
Reacts violently with oxidizing agents.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Reacts with acids.
Toxic fumes may be released if heated above the decomposition point.
- **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidizing agents.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values relevant for classification:		
67-64-1 acetone		
Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rabbit)

- **Primary irritant effect:**

- **on the skin:** Slight irritant effect on skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

(Contd. on page 9)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 8)

Irritant

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

- **Acute effects (acute toxicity, irritation and corrosivity):** Vapours have narcotic effect.
- **Repeated dose toxicity:** Repeated exposure may cause skin dryness or cracking.

12 Ecological information· **12.1 Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Can be reused after reprocessing.

Contact waste processors for recycling information.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information· **14.1 UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1090

(Contd. on page 10)

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

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14.2 UN proper shipping name



Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 1 L (0.3 gal).

· DOT Acetone
 · ADR 1090 ACETONE
 · IMDG, IATA ACETONE

14.3 Transport hazard class(es)

· DOT



· Class 3 Flammable liquids.
 · Label 3

· ADR



· Class 3 (F1) Flammable liquids.
 · Label 3

· IMDG, IATA



· Class 3 Flammable liquids.
 · Label 3

· 14.4 Packing group

· DOT, ADR, IMDG, IATA II

· 14.5 Environmental hazards:

· Marine pollutant: No

· 14.6 Special precautions for user Warning: Flammable liquids.

· Danger code (Kemler): 33

· EMS Number: F-E, S-D

· 14.7 Transport in bulk according to Annex II of
 MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 1L

· Transport category 2

· Tunnel restriction code D/E

(Contd. on page 11)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

· UN "Model Regulation":

UN1090, ACETONE, 3, II

(Contd. of page 10)

15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

- Section 355 (extremely hazardous substances):

None of the ingredients is listed.

- Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

- TSCA (Toxic Substances Control Act):

All ingredients are listed.

- Proposition 65 (California):

- Chemicals known to cause cancer:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

- Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

- Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

- Carcinogenic Categories

- EPA (Environmental Protection Agency)

67-64-1 | acetone | I

- IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

- TLV (Threshold Limit Value established by ACGIH)

67-64-1 | acetone | A4

- NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- Canada

- Canadian Domestic Substances List (DSL)

All ingredients are listed.

- Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

- Canadian Ingredient Disclosure list (limit 1%)

67-64-1 | acetone

(Contd. on page 12)

Safety Data Sheet
according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and
GHS

Revision: B, 03/15/2015

Trade name: Spirit Liquid Fill, Partial Immersion Thermometer

(Contd. of page 11)

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

R11 Highly flammable.

R36 Irritating to eyes.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 2: Flammable liquids, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

- **Sources**

PRP Testing & Design

Reynoldsburg Ohio

U

V

W

Material Safety Data Sheet

Issuing Date 21-Apr-2011

Revision Date 4 April 2014

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name WARD-Select Preservative as supplied in specimens

Recommended Use Proprietary preservative for biological specimens

Supplier Address

VWR Education, LLC
5100 West Henrietta Road
PO Box 92912
Rochester NY 14692-9012
TEL: 585-359-2502

Emergency Telephone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

May be harmful if swallowed, inhaled, or absorbed through skin
May produce an allergic reaction
May cause central nervous system depression
May adversely affect liver and kidney. Contains a known or suspected mutagen

Appearance Clear to slightly red

Physical State Liquid.

Odor Faint, Sweet, Fruity

Potential Health Effects

Potential Routes of Exposure Inhalation. Skin contact. Ingestion.

Acute Toxicity

Eyes

Non-irritating.

Skin

Non-irritating. May be harmful if absorbed through skin.

Inhalation

May be harmful if inhaled. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Ingestion

May cause additional effects as listed under "Inhalation". Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. May cause adverse liver and kidney effects. Ingredients in this product have caused teratogenic and fetotoxic effects in the absence of maternal toxicity. IARC classified ingested nitrates or nitrites capable of forming N-nitroso compounds as probably carcinogenic to humans (Group 2A). Ingested nitrites or nitrates become nitrosating agents under acidic gastric conditions react readily with nitrosatable compounds, especially secondary amines and amides, to generate N-nitroso compounds. Some of the N-nitroso compounds that can be formed in humans under these conditions are known carcinogens.

Aggravated Medical Conditions

Skin disorders. Respiratory disorders. Central nervous system. Pre-existing eye disorders. Kidney disorders. Liver disorders.

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects. Ethanol has been shown to interact synergistically with N-butylaloxime in humans to produce drowsiness, shortness of breath and palpitations.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Ethanol	64-17-5	15-40
Glycol alcohol	Proprietary	5-10
Dialdehyde	Proprietary	1-5
Methylisobutyl ketone	108-10-1	1-5
Methyl alcohol	67-56-1	1-5
Heptanesa	426260-76-6	1-5

Proprietary: HMIRC RN 8277: Wa July 13, 2011

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If irritation persists, call a physician.
Skin Contact	Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician.
Inhalation	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Consult a physician immediately.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If vomiting occurs naturally have victim lie on their side, in recovery position, to recude risk of aspiration. If breathing is irregular or stopped, administer artificial respiration. If the heart stops, administer cardiopulmonary respiration (CPR). Consult a physician immediately.
Notes to Physician	May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Combustible liquid.
Flash Point	Not determined.
Suitable Extinguishing Media	Use: Water spray. Carbon dioxide (CO ₂). Dry powder. Foam.
Hazardous Combustion Products	Carbon monoxide. Carbon dioxide (CO ₂).
Explosion Data	
Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	May be ignited by heat, sparks or flames
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA Health Hazard 2 Flammability 2 Instability 0 Physical and Chemical Hazards -

HMIS Health Hazard 2* Flammability 2 Physical Hazard 0 Personal Protection -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Evacuate personnel to safe areas. Remove all sources of ignition. Ensure adequate ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use personal protective equipment. Avoid contact with skin, eyes and clothing.
Environmental Precautions	Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.
Methods for Containment	Dike far ahead of liquid spill for later disposal.
Methods for Cleaning Up	Dam up. Use personal protective equipment. Cover liquid spill with sand, earth or other noncombustible absorbent material. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Handling	For educational use only. To be used only with direct supervision of a qualified professional specifically trained in laboratory procedures. Wear personal protective equipment. Do not
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breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Preserved specimens are not to be ingested.

Storage

Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m ³
Methyl alcohol 67-56-1	STEL = 250 ppm TWA: 200 ppm SKIN	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 325 mg/m ³ STEL: 250 ppm
Methylisobutyl ketone 108-10-1	STEL: 75 ppm TWA: 20 ppm	TWA: 100 ppm TWA: 410 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 205 mg/m ³ (vacated) STEL: 75 ppm (vacated) STEL: 300 mg/m ³	IDLH: 500 ppm TWA: 50 ppm TWA: 205 mg/m ³ STEL: 75 ppm STEL: 300 mg/m ³
Dialdehyde	TWA: 0.1 mg/m ³ inhalable fraction and vapor		
Glycol alcohol	Ceiling: 100 mg/m ³ aerosol only	(vacated) Ceiling: 50 ppm (vacated) Ceiling: 125 mg/m ³	

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992). Even in case of a full release, due to the small amount of substances present, it is not expected that exposure limits will be reached.

Engineering Measures

Showers. Eyewash stations.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin and Body Protection

Protective gloves. Lab coat and/or apron.

Respiratory Protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to slightly red.	Odor	Faint, Sweet, Fruity.
Odor Threshold	No information available	Physical State	Liquid
pH	No information available.	Autoignition Temperature	No information available.
Flash Point	No information available.	Boiling Point/Boiling Range	>100°C / >212°F
Decomposition Temperature	No information available.	Explosion Limits	No information available.
Melting Point/Range	No information available	Water Solubility	Completely soluble
Flammability Limits in Air	No information available.	Evaporation Rate	No information available
Specific Gravity	~1.00	Vapor Density	1.24 (air = 1)
Solubility	No information available.		
Vapor Pressure	No data available		
VOC Content (%)	37.71		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Strong acids. Strong bases. Strong oxidizing agents.
Conditions to Avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Carbon monoxide (CO). Carbon dioxide (CO ₂).
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

Eye Contact	Non-irritating.
Skin Contact	Non-irritating.

Additional toxicity information is based upon data available for the components.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h
Ethanol	10470 mg/kg (rat)		117 mg/l (vapor, male rat, 4h)
Methylisobutyl ketone	= 2080 mg/kg (Rat)	> 16000 mg/kg (Rabbit)	= 8.2 mg/L (Rat) 4 h
Dialdehyde	= 3300 mg/kg (Rat)		2410 mg/m ³ (aerosol, female rat 4h)
Glycol alcohol	4000 mg/kg (Rat)	9530 µL/kg (Rabbit)	-

Acute Toxicity Ingredients in the formulation have been shown to cause severe acute toxicity in humans. Adverse effect in humans have been shown to include blindness, brain hemorrhage, central nervous system (CNS) depression. Ingestion of methyl alcohol or glycol alcohol components of this formulation, have caused permanent toxic effects and death if medical attention is delayed.

Chronic Toxicity

Repeated contact may cause allergic reactions in very susceptible persons. Ethanol has been shown to be a reproductive toxin only when consumed as an alcoholic beverage. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage. May cause adverse liver and kidney effects. . Ingredients in this product have caused teratogenic and fetotoxic effects in the absence of maternal toxicity. IARC classified ingested nitrates or nitrites capable of forming N-nitroso compounds as probably carcinogenic to humans (Group 2A). Ingested nitrites or nitrates become nitrosating agents under acidic gastric conditions react readily with nitrosatable compounds, especially secondary amines and amides, to generate N-nitroso compounds. Some of the N-nitroso compounds that can be formed in humans under these conditions are known carcinogens.

Carcinogenicity

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). Ethanol has been shown to be carcinogenic in long-term studies only when consumed and abused as an alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3	Group 1	Known	X
Methylisobutyl ketone	A3	Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Target Organ EffectsBlood. Central nervous system (CNS). Optic Nerve (Blindness). Gastrointestinal tract (GI).
Kidney. Liver. Reproductive system. Respiratory system. Skin.**12. ECOLOGICAL INFORMATION****Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethanol		LC50 96 h: 12.0 - 16.0 mL/L static (Oncorhynchus mykiss) LC50 96 h: 13400 - 15100 mg/L flow-through (Pimephales promelas) LC50 96 h: > 100 mg/L static (Pimephales promelas)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50 48 h: 9268 - 14221 mg/L (Daphnia magna) EC50 24 h: = 10800 mg/L (Daphnia magna) EC50 48 h: = 2 mg/L Static (Daphnia magna)
Glycol alcohol	EC50 96 h: 6500 - 13000 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 14 - 18 mL/L static (Oncorhynchus mykiss) LC50 96 h: 40000 - 60000 mg/L static (Pimephales promelas) LC50 96 h: = 16000 mg/L static (Poecilia reticulata) LC50 96 h: = 27540 mg/L static (Lepomis macrochirus) LC50 96 h: = 40761 mg/L static (Oncorhynchus mykiss) LC50 96 h: = 41000 mg/L (Oncorhynchus mykiss)	EC50 = 10000 mg/L 16 h EC50 = 620 mg/L 30 min EC50 = 620.0 mg/L 30 min	EC50 48 h: = 46300 mg/L (Daphnia magna)
Dialdehyde	EC50 96 h: 0 - 348.59 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: > 500 mg/L (Desmodesmus subspicatus) EC50 96 h: > 500 mg/L (Desmodesmus subspicatus)	LC50 96 h: 460-680 mg/L static (Leuciscus idus) LC50 96 h: = 215 mg/L static (Pimephales promelas)	EC50 = 133.7 mg/L 16 h	EC50 48 h: = 404 mg/L (Daphnia magna)
Methylisobutyl ketone	EC50 96 h: = 400 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: 496-514 mg/L flow-through (Pimephales promelas)	EC50 = 79.6 mg/L 5 min	EC50 48 h: = 170 mg/L (Daphnia magna)
Methyl alcohol	-	LC50 96 h: 13500 - 17600 mg/L flow-through (Lepomis macrochirus) LC50 96 h: 18 - 20 mL/L static (Oncorhynchus mykiss) LC50 96 h: 19500 - 20700 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: = 28200 mg/L flow-through (Pimephales promelas) LC50 96 h: > 100 mg/L static (Pimephales promelas)	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	-

Chemical Name	Log Pow
Ethanol	-0.32
Glycol alcohol	-1.93

Dialdehyde	-0.85
Methylisobutyl ketone	1.19
Methyl alcohol	-0.77

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Do not re-use empty containers.

US EPA Waste Number U161

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methylisobutyl ketone - 108-10-1		Included in waste stream: F039		U161
Methyl alcohol - 67-56-1		Included in waste stream: F039		U154

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Ethanol	Toxic Ignitable
Methyl alcohol	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

MEX Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Methyl alcohol	67-56-1	1-5	1.0
Methylisobutyl ketone	108-10-1	1-5	1.0
Glycol alcohol		5-10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No
Sudden Release of Pressure Hazard No

Reactive Hazard

No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Methyl alcohol	5000 lb		RQ= 2270 kg final RQ RQ= 5000 lb final RQ
Methylisobutyl ketone	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Glycol alcohol	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations**California Proposition 65**

Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage. This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Developmental

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Ethanol		X			X
Methyl alcohol	X	X	X	X	X
Methylisobutyl ketone	X	X	X	X	X
Glycol Alcohol	X				
Ethylene glycol	X	X	X	X	X

International Regulations

Chemical Name	Carcinogen Status	Exposure Limits
Ethanol		Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³
Methyl alcohol		Mexico: TWA= 200 ppm Mexico: TWA= 260 mg/m ³ Mexico: STEL= 250 ppm Mexico: STEL= 310 mg/m ³
Methylisobutyl ketone		Mexico: TWA 50 ppm Mexico: TWA 205 mg/m ³ Mexico: STEL 75 ppm Mexico: STEL 307 mg/m ³
Glycol alcohol		Mexico: Ceiling 100 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D1B Very Toxic Materials

D2A Very toxic materials

D2B Toxic materials

B3 Combustible liquid

**Canadian National Pollutant Release Inventory (NPRI)**

Chemical Name	NPRI
Methyl alcohol	X
Methylisobutyl ketone	X
Glycol alcohol	X

Legend

X - Listed

16. OTHER INFORMATION**Prepared By**

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date

21-Apr-2011

Revision Date

April 4, 2014

Revision Note

Modified composition, modified first aid guidance, added toxicity phrases, added D1B classification.

General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 716.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Carbonate (Washing Soda)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium carbonate, anhydrous	497-19-8	Na ₂ CO ₃	105.99	
Synonym: Soda ash				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).

If on skin: Wash with plenty of water. **If skin irritation occurs:** Get medical advice or attention (P332+P313).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA Code

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Hygroscopic. Keep container tightly closed. Store in Flinn Chem-Saf™ bag. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Water and glycerol. Insoluble in alcohol.

Melting point: 856 °C
Specific gravity: 2.54

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, aluminum. Reacts vigorously with fluorine.
Shelf life: Fair, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Investigated as a mutagen.

ORL-RAT LD₅₀: 4090 mg/kg
IHL-RAT LC₅₀: 2300 mg/m³ 2 Hour
SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

LC₅₀ 96 Hr *Lepomis macrochirus*: 300 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (207-838-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY MANNER CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

X

Y

Section 1 Chemical Product and Company Information

CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product	YEAST, INSTANT, ACTIVE, DRY
----------------	-----------------------------

Synonyms	Not available
-----------------	---------------

Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: None required

Pictograms: No symbol required

Target organs: None known

GHS Classification: None required

GHS Label information: Hazard statement: None required

Precautionary statement: None required

Supplemental information:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Yeast, active, dry	68876-77-7	>98%	232-387-9
Contains:			
Sorbitan monostearate	1338-41-6	--	215-664-9
Ascorbic acid	50-81-7	--	200-066-2

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Z

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 859.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Zinc (Metal strips)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Substances and mixtures which, in contact with water, emit flammable gases (Category 1). In contact with water releases flammable gases which may ignite spontaneously (H260). Handle under inert gas. Protect from moisture (P231+P232). Keep away from any possible contact with water, because of violent reaction and possible flash fire (P223).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Zinc	7440-66-6	Zn	65.37	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Brush off loose particles from skin (P335). Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

Finely divided zinc dust is a severe fire hazard. Zinc dust in contact with acids, water or damp air evolves hydrogen gas. The heat produced may ignite the hydrogen gas. Minimize contact with moisture.

In case of fire: Use a tri-class dry class fire extinguisher (P370+P378). If there is contact with water use class D fire extinguisher according to NFPA book.

NFPA CODE

None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Shiny white metal with bluish-gray luster. Forms: granular, mossy dust, metal pieces, foil, sheets, shot, strips. Odorless. Soluble: Acids and alkalis. Insoluble in water.

Boiling point: 908 °C
Melting point: 419 °C
Specific gravity: 7.14

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong acids, strong bases, cadmium, sulfur chlorinated solvents, amines, and carbon disulfide. Avoid any source of flame for zinc dust only! Zinc dust can spontaneously combust when in contact with moisture.

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Dust may cause lung irritations.

ORL-RAT LD₅₀: N.A.

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: N.A.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-175-3).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

**ARCHIVED
MSDS/SDS SHEETS**



Material Safety Data Sheet

Almond Meal

1. Product Identification

Product Name: Almond Meal
INCI Name: Prunus Amygdalus Dulcis (Sweet Almond)
Chem. N.: No data
CAS Number: 999999-99-4
EINECS Number: 310-127-6

2. Physical and Chemical Properties

Melting Point: No data
Boiling Point: No data
Refractive Index: No data
Evaporation Rate: No data
Specific Gravity: No data
Solubility in Water: Insoluble
pH Value: No data
Appearance & Odor: Granular powder, mild or characteristic odor

3. Stability and Reactivity

Chemical Stability: No data
Incompatibility: Strong oxidizing agents
Hazardous Decomposition: Thermal decomposition may produce CO, CO₂, and oxides of nitrogen
Hazardous Polymerization: No data

4. Handling and Storage

Normal handling and storage consistent with good manufacturing procedures should be used. Keep containers closed until used. To maintain product quality, do not store in heat or direct sunlight.

5. Accidental Release Measures

Sweep and dispose, Biodegradable, natural product.

6. Exposure Controls & Personal Protection

Respiratory Protection: Wear face mask to protect from dust
Protective Clothing: No data
Other Protective Measures: No data

7. Hazards Identification

General: Non-hazardous
Inhalation: Non-hazardous
Eye Contact: Non-hazardous
Skin Contact: Non-hazardous
Ingestion: Non-hazardous

8. First Aid Measures

Eyes: Immediately flush eyes with plenty of cool water. If irritation occurs, consult a physician
Skin: Wash area with soap and water. If irritation occurs, consult a physician
Inhalation: Remove victim to fresh air.
Ingestion: Seek professional medical attention or contact local poison

control center.

9. Fire Fighting Measures

Flash Point: No data
Auto-ignition Temp: No data
Extinguishing Media: Water, CO₂, and foam
Fire Fighting Procedures: No data

10. Toxicological Information

Acute Oral LD50: No data
Dermal and Eye Irritation Test: No data
Carcinogenicity: No data
Mutagenicity: No data

11. Disposal Considerations

Dispose of in conformance with applicable laws and regulations

Important Notice: The information presented herein is based on experimental data submitted by the manufacturers of the raw materials and is considered scientifically correct; however, no warrant or representation, express or implied, is made as to the accuracy or suitability of this information for application to the purchaser's intended purpose or for consequences of its use and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of its use. Use these materials only as directed. If you have any questions regarding the proper interpretation of this sheet or the meanings of any terms used, we strongly urge you to speak with your physician. For further information concerning product safety and proper use, call the number listed on the front of the MSDS.

"Equate" Antacid

Effervescent Aspirin Pain Relief Tablets (421)

MATERIAL SAFETY DATA SHEET

Antacid

Page 1 of 4

1. CHEMICAL PRODUCT / COMPANY IDENTIFICATION

(Alka Seltzer)

Product Name: Effervescent Aspirin Pain Relief Tablets (421)
Description: Antacid & Pain Relief
CAS Number: Proprietary and not applicable to blends or mixtures

Company Identification: Tower Laboratories Ltd.
8 Industrial Park Road (P.O. Box 306)
Centerbrook, CT 06409
U.S.A.

Telephone: (860) 767-2127
Fax number: (860) 767-2129

2. COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Ingredient Name	%Wt.	TLV
50-78-2	Aspirin	10	5.00 mg/m ³ TWA
77-92-9	Citric Acid	31	Not established
144-55-8	Sodium Bicarbonate	59	Not established

OSHA PELs: Not Established

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Product poses little or no hazard if spilled and no unusual hazard if involved in a fire. See Potential Health Effects if the recommended dosage is exceeded.

POTENTIAL HEALTH EFFECTS (ACUTE and CHRONIC):

ACUTE EXPOSURE

Exceeding the recommended dosage may cause: rapid or deep breathing, confusion, agitation, nausea, vomiting, diminished hearing, ringing in the ears, hemorrhage, acid/base imbalances, coma, seizures, low blood pressure, irregular heartbeat, drowsiness, flushing, fever, convulsions. Allergic reactions are possible with symptoms of reddening, itching, rash, swelling of the face, throat or tongue, and breathing problems.

CHRONIC EXPOSURE

Chronic overexposure to this product may cause effects as noted under acute overexposure, disturbances in liver function, disturbances in kidney function.

AGGRAVATION OF PRE-EXISTING CONDITIONS:

Do not take this product without first consulting a health professional, if you have one of the following conditions: Asthma, Allergic to aspirin, Gastrointestinal ulcers or bleeding, High blood pressure, Congestive heart failure, Kidney disorders, Taking prescription medications, Persons who are at risk for hemorrhage, Young children, the elderly and pregnant women may be more susceptible to the effects of this product, Children and teenagers with chickenpox or flu symptoms (consult a doctor about Reye's Syndrome), Persons consuming alcohol may be more susceptible to the effects of this product.

Effervescent Aspirin Pain Relief Tablets (421)

MATERIAL SAFETY DATA SHEET

Page 2 of 4

4. FIRST AID MEASURES

INHALATION FIRST AID: Not applicable.

SKIN CONTACT FIRST AID: Not applicable.

EYE CONTACT FIRST AID: In case of contact, flush with plenty of water for at least 15 minutes. Call a physician.

INGESTION FIRST AID: In case of overdose, contact your regional poison control center or physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Not flammable.

FLAMMABLE LIMITS IN AIR, % BY VOLUME: Not established.

AUTOIGNITION TEMPERATURE: Not applicable.

EXTINGUISHING MEDIA: Water

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.

6. ACCIDENTAL RELEASE MEASURES

SPILLS PROCEDURE: Spills should be swept up and placed in appropriate containers for disposal. Avoid creating dusty conditions.

7. HANDLING AND STORAGE

RECOMMENDED STORAGE CONDITIONS: Room Temperature. Store in a dry place away from excessive heat.

SHELF LIFE: Do not use after expiration date.

HANDLING (PERSONNEL): Keep this and all drugs out of the reach of children. Avoid contact with eyes. Avoid contact with skin or clothing. Wash thoroughly after handling. Store in a dry place away from excessive heat. Reseal containers immediately after use. Use normal precautions for storage of a drug.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION SYSTEM: Under normal conditions of use, special ventilation is not required.

PERSONAL RESPIRATORS (NIOSH APPROVED): Under normal conditions for use, respiratory protection is not required.

SKIN PROTECTION: No special skin protection requirements during normal handling and use.

EYE PROTECTION: None for normal use.

AIRBORNE EXPOSURE LIMITS: Refer to OSHA PELs in Section 2 above.

Effervescent Aspirin Pain Relief Tablets (421)

MATERIAL SAFETY DATA SHEET

Page 3 of 4

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Solid	COLOR: White
ODOR: Odorless	BOILING POINT: Not applicable
SPECIFIC GRAVITY: Not Applicable	BULK DENSITY: Not applicable
MELTING / FREEZING POINT: Not applicable	VAPOR PRESSURE: Not applicable
pH: Not applicable	

10. STABILITY AND REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: Avoid extreme heat. Avoid contact with moisture/water.

POLYMERIZATION: Will not occur.

SUBSTANCES TO AVOID: See carton for full directions and warnings.

DECOMPOSITION PRODUCTS: None known.

11. TOXICOLOGICAL INFORMATION

TOXICITY: No data available for this product.

TOXICITY OF ASPIRIN: Acute oral toxicity: LD50 => 1,100 mg/kg (Rat)

12. ECOLOGICAL INFORMATION

No data available for this product.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Dispose of material in accordance with federal, state and local requirements. (State and local disposal regulations may differ from federal disposal regulations.)

14. TRANSPORTATION INFORMATION

Per recommended practices and procedures for land, sea, and air transportation as recognized by the:
US Dept. of Transportation (DOT)
International Maritime Organization (IMO)
International Civil Aviation Organization (ICAO)

PROPER SHIPPING NAME: Nonprescription Drug

HAZARD CLASSIFICATION: Non-Regulated

15. REGULATORY INFORMATION

This product is exempt from TSCA Regulation when used for pharmaceutical application.
This product is exempt under SARA § 302 and § 311 and § 312 and § 313.

This material is not subject to the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

Effervescent Aspirin Pain Relief Tablets (421)

MATERIAL SAFETY DATA SHEET

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16. OTHER INFORMATION

HMIS Rating: Health - 1 Flammability - 0 Reactivity - 0

0 = Minimal, 1 = Slight, 2 = Moderate, 3 = Serious, 4 = Severe

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS Standard (ANSI Z400.1-2005).

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Tower Laboratories Ltd. The data on this sheet are related only to the specific material designated herein. Tower laboratories Ltd. assumes no legal responsibility for use or reliance upon these data.

END OF MSDS

Baking Soda

CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-960

ISSUE DATE: 03/09/12

PAGE 1 OF 5

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

SODIUM BICARBONATE (Baking soda)

24 HOUR EMERGENCY TELEPHONE:

CHEMTREC 1-800-424-9300 (USA)

+001-703-527-3887 (INT'L)

Medical Emergency Phone:

1-888-234-1828 (USA)

+001-952-853-1925 (INT'L)

Manufacturer's Name and Address: Church & Dwight Co., Inc.
469 N. Harrison Street
Princeton, NJ. 08543-5297
USA

Customer Information:

1-800-524-1328 (USA)

+001-609-497-7220 (INT'L)

Product Use: Food ingredient, Pharmaceutical, Water Treatment,
General Industrial Use

Chemical Name: Sodium bicarbonate

Chemical Formula: NaHCO₃

Synonyms/Common Names: Baking Soda

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
White crystalline powder; no odor. Not a fire hazard. No significant health or environmental effects associated with this material.	
<u>HMIS Rating</u>	
Health	0
Fire	0
Reactivity	0

Potential Health Effects

EYE: Not an eye irritant.

SKIN CONTACT: Not a skin irritant.

CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-960

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INGESTION: Material is practically non-toxic. Small amounts (1-2 tablespoonfuls) swallowed during normal handling operations are not likely to cause injury as long as the stomach is not overly full; swallowing larger amounts may cause injury (see Note in Section IV).

INHALATION: None known.

SUBCHRONIC EFFECTS/CARCINOGENICITY: Based on published studies on its effects in animals and humans, sodium bicarbonate is not teratogenic or genotoxic. Only known subchronic effect is that of a marked systemic alkalosis. Not classified as carcinogenic by NTP, IARC, OSHA, ACGIH or NIOSH.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Ingredient (% by Weight)</u>	<u>CAS Number</u>
Sodium Bicarbonate	100% 144-55-8

Not hazardous under OSHA Standard 29 CFR 1910.1200.

Not a WHMIS controlled substance.

4. FIRST AID MEASURES

EYES: Check for and remove contacts. Flood eyes with clean flowing water, low pressure and luke warm (not hot) if possible, occasionally lifting eyelids.

INGESTION: If large amounts of this material are swallowed, do not induce vomiting. Administer water if person is conscious. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASHPOINT: Not combustible

METHOD USED: Not applicable

EXTINGUISHING MEDIA: Non-combustible material. Use extinguishing media appropriate for surrounding fire.

FIRE-FIGHTING INSTRUCTIONS: Carbon Dioxide may be generated making necessary the use of a self-contained breathing apparatus (SCBA) and full protective equipment (Bunker Gear). Carbon dioxide is an asphyxiant at levels over 5% w/w. Sodium oxide, another thermal decomposition product existing at temperatures above 1564°F is a respiratory, eye, and skin irritant. Avoid inhalation, eye and skin contact with sodium oxide dusts.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-960

ISSUE DATE: 03/09/12

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6. ACCIDENTAL RELEASE MEASURES

Scoop up into dry, clean containers. Wash away small uncontaminated amounts of residue with water.

7. HANDLING AND STORAGE

Store in cool, dry areas and away from incompatible substances (see Section 10).

Sodium Bicarbonate reacts with acids to yield carbon dioxide gas which can accumulate in confined spaces. Do not enter confined spaces until they have been well ventilated and carbon dioxide and oxygen levels have been determined to be safe.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS: None established.

RESPIRATORY PROTECTION: Dust mask required if total dust level exceeds 10 mg/m³.

PROTECTIVE GLOVES: General purpose for handling dry product. Impervious gloves when working with solutions.

EYE PROTECTION: Safety glasses when handling bulk material or when dusts are generated.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Full cover clothing. Apron where splashing may occur when working with solutions.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White crystalline powder.

ODOR: None.

PHYSICAL STATE: Solid

pH AS IS: Not Applicable

pH (1% SOLN. w/v): 8.2

VAPOR PRESSURE: Not applicable.

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

FREEZING/MELTING POINT: Not applicable.

SOLUBILITY IN WATER: 8.6 g/100 ml @ 20°C.

BULK DENSITY (g/cc): 62 lb/Ft³

% VOCs: Not applicable.

VOLATILE ORGANIC COMPOUNDS: Not applicable.

MOLECULAR WEIGHT: 84.02

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



MATERIAL SAFETY DATA SHEET

MSDS NUMBER: MSDS-960

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CONDITIONS TO AVOID: Temperatures above 65°C (150°F).

INCOMPATIBILITY WITH OTHER MATERIALS: Reacts with acids to yield carbon dioxide. May also yield free caustic in presence of lime dust (CaO) and moisture (i.e., water, perspiration). Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy may occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Heating above 100°C may cause dangerous levels of carbon dioxide gas to be present in confined spaces. Yields sodium oxide if exposed to temperatures above 850°C. Avoid inhalation, eye and skin contact with sodium oxide.

HAZARDOUS POLYMERIZATION: Not applicable.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS: The material was minimally irritating to unwashed eyes and practically non-irritating to washed eyes (rabbits).

SKIN EFFECTS: Not a skin irritant or dermally toxic. Not a contact sensitizer.

ACUTE ORAL EFFECTS: Acute Oral-rat LD₅₀ = 7.3 g/kg.

ACUTE INHALATION: LC₅₀ (rat) > 4.74 mg/l.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

Daphnids: EC₅₀ = 4100 mg/l.

Bluegill: LC₅₀ = 7100 mg/l.

Rainbow Trout: LC₅₀ = 7700 mg/l.

PERSISTENCE: This product is not expected to persist in the environment.

BIOACCUMULATION: This product is not expected to bioaccumulate.

BIODEGRADATION: This material is inorganic and not subject to biodegradation.

13. DISPOSAL CONSIDERATIONS

Bury in a secured landfill in accordance with all local, state and federal environmental regulations. Empty containers may be incinerated or discarded as general trash.

14. TRANSPORTATION INFORMATION

D.O.T. SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION

CLEAN AIR ACT SECTION 611: Material neither contains nor is it manufactured with ozone depleting substances (ODS).

CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



MATERIAL SAFETY DATA SHEET

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FEDERAL WATER POLLUTION CONTROL ACT (40 CFR 401.15): Material contains no intentionally added or detectable (contaminant) levels of EPA priority toxic pollutants.

FOOD AND DRUG ADMINISTRATION: Generally Recognized As Safe (GRAS) direct food additive (21 CFR 184.1736).

US DEPARTMENT OF AGRICULTURE: List of Proprietary Substances - Permitted Use Codes 3A, JI, A1, G1, and L1.

CERCLA REPORTABLE QUANTITY: None

OSHA: Not hazardous under 29 CFR 1910.1200

RCRA: Not a hazardous material or a hazardous waste by listing or characteristic.

SARA TITLE III:

Section 302, Extremely Hazardous Substances: None

Section 311/312, Hazardous Categories: Non-hazardous

Section 313, Toxic Chemicals: None

Sodium Bicarbonate is reported in the EPA TSCA Inventory List.

Contains no VOCs.

NATIONAL STOCKING NUMBER: 6810002646618, Contract No. DLA 40086C1831

NSF STANDARD 60: Corrosion and Scale Control in Potable Water. Max use 200 mg/l.

CANADA-DSL

EUROPEAN INVENTORY (EINECS): 205-633-8

JAPANESE INVENTORY (MITI): 1-164

AUSTRALIAN INVENTORY (AICS): Carbonic acid, monosodium salt.

KOREA- yes

PHILLIPINE- yes

16. OTHER INFORMATION

SUPERSEDES DATE: 07/12/07

REASON FOR REVISION: New ANSI Revision.

For additional non-emergency health, safety and environmental information telephone 609.279.7705 or write to:

Church & Dwight Co. Inc.
Product Stewardship
469 North Harrison Street
Princeton, New Jersey 08543

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Calcium Chloride, AnhydrousScholar
Chemistry

MSDS # 146.00

Section 1: Product and Company Identification**Calcium Chloride, Anhydrous****Synonyms/General Names:** Calcium dichloride**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.**24 Hour Emergency Information Telephone Numbers****CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification*White granules, pellets or lumps, no odor***HMIS (0 to 4)**

Health	1
Fire Hazard	0
Reactivity	0

CAUTION! Body tissue irritant and slightly toxic by ingestion.

Target organs: N/A

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Calcium Chloride, Anhydrous (10043-52-4), 90-97%.

Sodium Chloride (7647-14-5), 1-2%.

Potassium Chloride (7447-40-7), 2-3%.

Strontium Chloride (10476-85-4), 0-1%.

Section 4: First Aid Measures*Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.**Section 5: Fire Fighting Measures**

Non-flammable solid. When heated to decomposition, emits toxic fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

**Section 6: Accidental Release Measures**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage**Green****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.**Section 8: Exposure Controls / Personal Protection**

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Calcium Chloride: OSHA PEL: Not Available, ACGIH: TLV: Not Available, STEL: Not Available.

Section 9: Physical and Chemical Properties

Molecular formula	CaCl ₂	Appearance	White granules, pellets or lumps.
Molecular weight	110.99.	Odor	None.
Specific Gravity	2.5 g/mL @ 20°C.	Odor Threshold	N/A.
Vapor Density (air=1)	11.3.	Solubility	Soluble in water and alcohol .
Melting Point	775°C .	Evaporation rate	N/A (<i>Butyl acetate = 1</i>).
Boiling Point/Range	1935°C.	Partition Coefficient	N/A (<i>log P_{ow}</i>).
Vapor Pressure (20°C)	N/A.	pH	N/A.
Flash Point:	N/A.	UEL	N/A.
Autoignition Temp.:	N/A.	LEL	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture. Contact with moisture generates heat.

Stability: Stable under normal conditions of use and storage.

Incompatibility: Corrosive to brass and mild steel, sulfuric acid, aluminum and ferrous metals.

Shelf life: Fair shelf life, store in a cool, dry environment.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

Ingestion: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. *Inhalation:* Irritation of mucous membranes, coughing, wheezing, shortness of breath,

Chronic Effects: No information found.

Sensitization: none expected

Calcium Chloride: LD50 [oral, rat]; 1000 mg/kg; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A

Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Ecological impact has not yet been determined.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name:	Not Regulated.	Canada TDG:	Not Regulated.
DOT Hazard Class:	N/A.	Hazard Class:	N/A.
Identification Number:	N/A.	UN Number:	N/A.

Section 15: Regulatory Information

EINECS: Listed (233-140-8) .

WHMIS Canada: D2B, Toxic material causing other toxic effects.

TSCA: All components are listed or are exempt.

California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009

Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.

Safety Precautions For Handling Carolina Preserved Specimens

To achieve the necessary level of safety in the laboratory, the instructor should be familiar with all chemicals present and the necessary precautions to be taken in using them.

Carolina provides specimens preserved in alcohol, *Carosafe*[™] (contains propylene glycol), and formalin solutions. Information is provided in the catalog regarding which particular preservative is used in a certain type of specimen. Note that specimens are never provided in a formalin preservative unless this is specifically requested by the customer. Note also that specimens that are preserved with embalming fluids, and are never treated with *Carosafe*[™], are provided with a specific Material Safety Data Sheet (MSDS) prepared for that particular embalming fluid. Regardless of the preservative that is used, we recommend you follow these safety tips whenever working with preserved specimens:

1. Wear appropriate protective eyewear at all times.
2. Wear appropriate protective equipment such as gloves and lab coats.
3. Work only in a well ventilated area.
4. Prohibit eating, drinking, and smoking in the work area.
5. In the event of contact, wash skin with soap and water; flush eyes with water.
6. If overexposure to any chemical occurs, seek medical attention immediately.
7. Be careful with sharp objects such as pins, scalpels, and the spines and teeth of specimens.

Formalin-preserved or embalmed specimens should always be used in a well-ventilated area to prevent irritation to the eyes, skin, or respiratory tract. The use of goggles lessens eye irritation from formaldehyde vapors. If direct contact to eyes or skin occurs, wash thoroughly with water.

Isopropanol is very flammable, so avoid all sparks, open flames, and excessive heat.

The components of *Carosafe*[™] can cause burns to eyes and skin. In addition, the vapor of some components can be irritating if inhaled.

When working with preserved materials, be careful with sharp objects such as pins, scalpels, and the spines and teeth of specimens. When using a scalpel, we recommend cutting away from oneself and ensuring that fingers are kept out of the cutting path at all times.

Carolina preserved specimens are available in *Carosafe*[™], a propylene glycol-based shipping and holding fluid. *Carosafe*[™] is not a fixative; it is a preservative designed to prevent mold and tissue deterioration after the tissue has been properly fixed with formalin. *Carosafe*[™] is an effective substitute for the standard formalin preservative and acts to hold the unpleasant odor of formaldehyde to an absolute minimum. Additionally, Carolina preserved animals may be ordered "damp-packed." Our tradename for this improved method of packaging is *Caropak*[™]. Preserved animals shipped in *Caropaks* have been processed with *Carosafe*[™], and are as "odorless" as effective fixation and preservation techniques allow.

The reverse side of this sheet contains further safety and health information regarding the three most common chemicals used by Carolina in the preservation process. This information is given in the form of a columnar table which contains all of the information required by OSHA to be present on a Material Safety Data Sheet (MSDS) under the Hazard Communication Standard (29 CFR 1910.1200). Additional information may be obtained by calling Carolina during regular business hours at 336-584-0381.

Material Safety Data Sheet



Carosafe®

Revised: 07/13/2010
Replaces: 05/09/2010
Printed: 08/02/2010

Carolina Biological Supply Company

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

CAROLINA
www.carolina.com

Section 1 - Product Description

Product Name: Carosafe®

Product Code(s): 85-3341, 85-3343, 85-3345

Size: 4L, 20L, 4 x 20L

Chemical Name: N/A

CAS Number: See Section 3

Formula: See Section 3

Synonyms: None

Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: Harmful if swallowed. Causes burns. Irritating to eyes, respiratory system and skin.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation to skin.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Propylene Glycol(CAS# 57-55-6); Ethylene Glycol Phenyl Ether (CAS# 122-99-6); 2-amino-2-ethyl-1,3-propanediol (CAS# 115-70-8)

TLV units: N/A

PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:

Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin - After contact with skin, wash immediately with plenty of ... (Water, unless specified as water-reactive).

Ingestion - If swallowed, rinse mouth with water (only if the person is conscious). If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Inhalation - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Stability: Stable

Conditions to Avoid: Heat and sources of ignition.

Incompatibility (Materials to Avoid): Heavy Metals, Bases, Metals, Water-reactive Material, Oxidizers,

Hazardous Decomposition Products: NO_x, CO_x,

Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Propylene Glycol) orl-rat LD50 20 gm/kg

(Ethylene glycol Phenyl Ether) orl-rat LD50 1260 mg/kg

Effects of Overexposure:

Acute: See Section 2

Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: N/A

Target Organs: Eyes, Skin, Kidneys,

Primary Route(s) of Entry: Inhalation, ingestion, eye or skin contact.

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute Chronic

WARNING: This product contains a material known to the state of California to cause cancer.

Name List:

Propylene Glycol - No

Ethylene Glycol Phenyl Ether - No

2-amino-2-ethyl-1, 3-propanediol: No

Chemical Category:

Propylene Glycol - No

Ethylene Glycol Phenyl Ether - Yes

2-amino-2-ethyl-1, 3-propanediol: No

CERCLA Section 103 RQ(lb.): Propylene Glycol - No

Ethylene Glycol Phenyl Ether - No

2-amino-2-ethyl-1, 3-propanediol: No

RCRA Section 261.33: Propylene Glycol - No

Ethylene Glycol Phenyl Ether - No

2-amino-2-ethyl-1, 3-propanediol: No

Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources

SAFETY DATA SHEET



This Safety Data Sheet (SDS) complies with the requirements of the U.S. Federal Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200, as updated in 2012) and equivalent state Standards. It has also been developed in accordance with the United Nations Globally Harmonized System of Classification of Chemicals (GHS) and the Canadian Workplace Hazardous Materials Information System (WHMIS). Refer to Section 16 of this document for the definition of terms and abbreviations.

SECTION 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

- ITEM NUMBER(S): 320002, 320007, 320091
- PRODUCT NAME:
 - 243 WAXIE-Green Neutral Cleaner**
 - 3 L: 320007
 - WAXIE-Green Neutral Cleaner**
 - 1 GL: 320002
 - WAXIE-Green All-Purpose Cleaner**
 - 1 QT: 320091 (Ready to Use)

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE

- RECOMMENDED USE: Multipurpose Cleaner
- IDENTIFIED USERS: For sale to, use and storage by service persons only.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

- MANUFACTURER/ SUPPLIER: **WAXIE Sanitary Supply**
- ADDRESS: 9353 Waxie Way; San Diego, CA 92123-1036
- BUSINESS PHONE: 1-800-995-4466
- EMERGENCY PHONE: 1-800-255-3924 (CHEMTEL; 24 hours)

1.4 OTHER PERTINENT INFORMATION

- The relevant hazard and safety data are specified for both the **Product as SOLD** and **Product at USE DILUTION**, where appropriate.
- Product certified for reduced environmental impact. View specific attributes evaluated: ul.com/el (UL 2759).

SECTION 2: HAZARD IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

OSHA/HCS Status	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Classification of the Substance or Mixture	Acute Toxicity (Oral, Category 5) Eye Damage/Irritation (Category 2B) Skin Corrosion/Irritation (Category 3)	Acute Toxicity (Oral, Category 5) Eye Damage/Irritation (Category 2B)

2.2 LABEL ELEMENTS:

ELEMENT	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hazard Pictograms		Not Applicable
Signal Word	WARNING.	WARNING.
Hazard Statements	May be harmful if swallowed. Causes eye irritation. Causes mild skin irritation.	May be harmful if swallowed. Causes eye irritation.

SECTION 2: HAZARD IDENTIFICATION (Continued)

Precautionary Statements

Prevention

Keep out of reach of children.
Wear eye/face protection.
Wash hands thoroughly after handling.

Keep out of reach of children.
Wash hands thoroughly after handling.

Response

Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician.
IF SKIN IRRITATION OCCURS: Get medical advice/attention.

Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If eye irritation persists, see a physician.

Precautionary Statements

Storage

Not established; follow guidelines in section 7.

Not established; follow guidelines in section 7.

Disposal

Not established; follow guidelines in section 13.

Not established; follow guidelines in section 13.

2.3 OTHER PERTINENT HAZARDS NOT OTHERWISE CLASSIFIED

- Not applicable.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1/3.2 SUBSTANCES/MIXTURES

CHEMICAL	CAS NUMBER	GHS HAZARD CLASSIFICATION FOR CHEMICAL	% (w/w)
Alcohols, C9-11, Ethoxylated	68439-46-3	Classification for the pure chemical: Acute Toxicity (Oral, Category 4); Skin Corrosion/Irritation (Category 2); Eye Damage/Irritation (Category 2); Aquatic Toxicity (Chronic, Category 4)	Proprietary ¹
Citric acid, Trisodium salt dihydrate	68-04-2	Not classified	Proprietary
Water and other components less than 1% in concentration within this solution. The remaining components of this product are not classified as hazardous in their existing concentrations.			Balance

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

AREA EXPOSED

Product as SOLD

Product at USE DILUTION

Eye Contact

Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Check for and remove contact lenses. Seek medical attention if irritation persists.

Flush with copious amounts of water for 15 minutes. "Roll" eyes during flush. Check for and remove contact lenses. Seek medical attention if irritation persists.

Skin Contact

Flush area with warm, running water for several minutes. Seek medical attention if irritation persists.

Flush area with warm, running water for several minutes.

¹ The exact percentage of composition has been withheld as a trade secret. All relevant physical and health hazards have been declared, in accordance with regulatory requirements.

SECTION 4: FIRST AID MEASURES (Continued)

Inhalation	Obtain fresh air.	Obtain fresh air.
Ingestion	If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.	If conscious only: Rinse mouth with water. Drink several cups of water. Do not induce vomiting. Contact a Poison Control Center or physician for instructions.

4.2 MOST IMPORTANT ACUTE AND CHRONIC EXPOSURE SYMPTOMS

• ACUTE HEALTH EFFECTS:

AREA EXPOSED	Product as SOLD	Product at USE DILUTION
Eye Contact	Causes eye irritation.	May cause eye irritation, depending on the duration of skin contact.
Skin Contact	Prolonged contact has the potential to be mildly irritating.	No adverse effects anticipated.
Inhalation	May cause respiratory tract irritation; symptoms may include coughing and sneezing.	May cause mild respiratory tract irritation; symptoms may include coughing and sneezing depending on volume of mist/spray inhaled.
Ingestion	May cause gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting.	May cause gastrointestinal system irritation; symptoms may include pain, sore throat, nausea and vomiting.

• CHRONIC HEALTH EFFECTS:

Product as SOLD	Product at USE DILUTION
None reported.	None reported.

• TARGET ORGANS:

Product as SOLD	Product at USE DILUTION
Skin, eyes.	None reported.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

The following information is for both **Product AS SOLD** and **Product at USE DILUTION**.

- **GENERAL INFORMATION: For all exposures:** In case of accident, or if you feel unwell, seek medical advice immediately. Take this document and a copy of the label to the healthcare professional.
- **RECOMMENDATIONS TO PHYSICIANS:** Treat symptomatically.
- **MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:** None reported.

SECTION 5: FIREFIGHTING MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

5.1 EXTINGUISHING MEDIA

- **RECOMMENDED FIRE EXTINGUISHING MEDIA:** Water Spray, Water Jet, Dry Powder, Foam, Carbon Dioxide, Halon, or any other.
- **UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

SECTION 5: FIREFIGHTING MEASURES (Continued)

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

- **NFPA FLAMMABILITY CLASSIFICATION:**

Classification

NFPA Rating

Product as SOLD



NFPA Classification

Not flammable.flammable.

Product at USE DILUTION



Not flammable.

- **UNUSUAL HAZARDS IN FIRE SITUATIONS:**

Decomposition Products

Carbon dioxide, carbon monoxide, and irritating vapors.

Explosion Sensitivity to Mechanical Impact

Not applicable.

Explosion Sensitivity to Static Discharge

Not applicable.

5.3 ADVICE FOR FIREFIGHTERS

- Self-Contained Breathing Apparatus and full protective equipment for fire response should be worn in any situation. Move containers from fire area if it can be done without risk to personnel. Otherwise, use water spray to keep fire-exposed containers cool. Because this product is a cleaning agent, any equipment that comes in contact with this solution can be rinsed thoroughly with water and then returned to service.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

- **RESPONSE TO INCIDENTAL RELEASES:** Personnel who have received basic chemical safety training can generally handle small-scale releases. Gloves and safety glasses must be worn when cleaning-up spills. Use caution during clean-up; contaminated floors and items may be slippery.
- **RESPONSE TO NON-INCIDENTAL RELEASES:** Generally, releases of this product will be no larger than the loss of one shipment of material (therefore, 4 gallons or less). Subsequently, personnel can follow the instructions for incidental releases. As needed, respond to non-incident chemical releases of this product (such as the simultaneous destruction of several pallets of this product) by clearing the impacted area and contacting appropriate emergency personnel.
- **RESPONSE PROCEDURES FOR ANY RELEASE:** Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse area thoroughly. Because this product is a cleaning agent, all items that come in contact with the solution can be returned to service after rinsing.

6.2 ENVIRONMENTAL PRECAUTIONS

- Avoid response actions that can cause a release of a significant amount of product (more than 4 gallons) into the environment. Avoid accidental dispersal of spilled material into soil, waterways and sewers.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

- **SPILL RESPONSE EQUIPMENT:** Polypad or other absorbent material.

6.4 REFERENCES TO OTHER SECTIONS

- **SECTION 8:** For exposure levels and detailed personal protective equipment recommendations.
- **SECTION 13:** For waste handling guidelines.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hygiene Practices	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.	Keep out of reach of children. Follow good chemical hygiene practices. Do not smoke, drink, eat, or apply cosmetics in the chemical use area. Avoid inhalation of mists and sprays. Use in well-ventilated area. Avoid contact with skin or eyes. Remove contaminated clothing promptly. Clean up spilled product immediately.
Handling Practices	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.	Employees must be appropriately trained to use this product safely as needed. Keep containers closed when not in use.

SECTION 7: HANDLING AND STORAGE (Continued)

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Storage Practices	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.	Ensure all containers are correctly labeled. Store containers away from direct sunlight, sources of intense heat, or where freezing is possible. Store this product away from incompatible chemicals.
Incompatibilities	See Section 10 (Stability and Reactivity).	See Section 10 (Stability and Reactivity).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS





- **AIRBORNE EXPOSURE LIMITS:** Not established.
- **BIOLOGICAL OCCUPATIONAL EXPOSURE LIMITS:** Not established.

8.2 EXPOSURE CONTROLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Engineering Controls	Use in well-ventilated environment.	Use in well-ventilated environment.
Respiratory Protection	None needed in normal circumstances of use.	None needed in normal circumstances of use.
Hand Protection	Neoprene, PVC, or butyl gloves are recommended. Ensure gloves are intact prior to use.	Standard chemical-resistant gloves used in janitorial work are recommended.
Eye Protection	Safety glasses.	Safety glasses.
Body Protection	Standard protection used in janitorial service.	Standard protection used in janitorial service.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

8.3 PERSONAL PROTECTION SYMBOLS

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Hand Protection		
Eye Protection		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Appearance	Yellow liquid.	Colorless.
Odor	Citrus.	Citrus.
Odor Threshold	Not determined.	Not determined.
pH	6 - 8	7.0
Melting Point/Freezing Point	Approx. 0°C (32 °F).	Approx. 0°C (32 °F).
Initial Boiling Point/Boiling Range	> 99°C (210 °F).	Approximately 100°C (212°F).
Flash Point	Not applicable.	Not applicable.
Evaporation Rate (Water = 1)	No data available.	Approx. 1.0.
Flammability	Not applicable.	Not applicable.
Upper/Lower Explosive Limits	Not determined.	Not applicable.
Vapor Pressure	Not determined.	Not determined.
Vapor Density	Not determined.	Not determined.
Relative Density	1.03 (8.45 lbs/gal)	Approx. 1.0.
Solubility	Completely soluble in water.	Completely soluble in water.
Partition Coefficient/n-octanol/water	Not determined.	Not determined.
Autoignition Temperature	Not applicable.	Not applicable.
Decomposition Temperature	Not determined.	Not determined.
Viscosity	Not determined.	Not determined.

9.2 OTHER INFORMATION

- VOC (less water & exempt): Not applicable.
- WEIGHT% VOC: Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

10.1 REACTIVITY

- Not reactive under typical conditions of use or handling.

10.2 CHEMICAL STABILITY

- Normally stable under standard temperatures and pressures.

SECTION 10: STABILITY AND REACTIVITY (Continued)

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

- This product is not self-reactive, water-reactive, or air-reactive.
- This product will not undergo hazardous polymerization.

10.4 CONDITIONS TO AVOID

- Avoid contact with incompatible chemicals.
- Because of the bacillus culture, store away from extremes of heat and cold, and store away from direct sunlight.

10.5 INCOMPATIBLE MATERIALS

- Strong oxidizing agents, strong acids, strong bases, water reactive materials.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

- Products of thermal decomposition of this product include oxides of carbon (i.e., carbon monoxide and carbon dioxide.)

SECTION 11: TOXICOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

- **ACUTE TOXICITY:** Product – Estimated LD₅₀ (Oral, Rat) > 8000 mg/kg
 - **TOXICOLOGY DATA:** The following data are available for the hazardous components in this product listed in Section 3 (Composition/Information on Ingredients).

CITRIC ACID, TRISODIUM SALT
DIHYDRATE

LD₅₀ (intraperitoneal, mouse) = 1364mg/kg
LD₅₀ (intravenous, mouse) = 170 mg/kg
LD₅₀ (intravenous, rabbit) = 449 mg/kg
LD₅₀ (intraperitoneal, rat) = 1548mg/kg

ALCOHOLS, C9-11, ETHOXYLATED
LD₅₀ (Oral, Rat) = 1000 mg/kg

- **DEGREE OF IRRITATION:** Mild Skin and eye irritation. See Section 4 (First Aid Measures) for more details.
- **SENSITIZATION:** The components of this product are not reported to have skin or respiratory sensitization effects.
- **REVIEW OF ACUTE SYMPTOMS AND EFFECTS BY ROUTE OF EXPOSURE:** See Section 2 (Hazards Information) and Section 4 (First-Aid Measures) for additional details.

	<u>Product as SOLD</u>	<u>Product at USE DILUTION</u>
Eyes	Irritate the eyes.	May irritate the eyes.
Skin	May cause mild skin irritation.	No adverse effects anticipated.
Inhalation	May cause respiratory tract irritation.	May cause mild respiratory tract irritation.
Ingestion	May cause gastrointestinal system irritation.	May cause gastrointestinal system irritation.

- **CHRONIC TOXICITY:**
 - **CARCINOGENICITY STATUS:** Not applicable.
 - **REPRODUCTIVE TOXICITY INFORMATION:** The components of this product are not reported to cause reproductive effects under typical circumstances of exposure.
 - **MUTAGENIC EFFECTS:** The components of this product are not reported to cause mutagenic effects under typical circumstances of exposure.
 - **SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:** Not applicable.

SECTION 11: TOXICOLOGICAL INFORMATION (Continued)

- **SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:** Not applicable.
- **ASPIRATION HAZARD:** Not applicable.
- **OTHER INFORMATION:**
 - **TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** None known.
 - **ADDITIONAL TOXICOLOGY:** Not applicable.

SECTION 12: ECOLOGICAL INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

12.1 TOXICITY

- Based on available data, this product is not anticipated to be harmful or fatal to contaminated terrestrial or aquatic plants or animals.
- The following aquatic toxicity data are available for components of this product:

ALCOHOLS, C9-11, ETHOXYLATED

LC50 - Cyprinus carpio (Carp) - 1.4 mg/l - 96 hours

LC50 - Daphnia magna (Water flea) - 6.46 mg/l - 48 hours

12.2 PERSISTENCE AND DEGRADABILITY

- When released into the soil, the components of this product are expected to biodegrade, dissipate in soils via oxidation, or otherwise chemically degrade or photo-decompose via solar radiation.

12.3 BIOACCUMULATIVE POTENTIAL

- This product is not anticipated to bioaccumulate significantly.

12.4 MOBILITY IN SOIL

- It is to be expected this product will have some mobility in soil.

12.5 OTHER ADVERSE EFFECTS

- None reported.

SECTION 13: DISPOSAL CONSIDERATION

13.1 WASTE TREATMENT METHODS

Product as SOLD

Dispose of in accordance with local, State and Federal regulations.

Product at USE DILUTION

Dispose of unused product in accordance with local, State and Federal regulations.

13.2 DISPOSAL CONSIDERATIONS

Product as SOLD

Not applicable.

Product at USE DILUTION

Not applicable.

SECTION 14: TRANSPORT INFORMATION

Information in this section is for **Product as SOLD**.

14.1 DANGEROUS GOODS BASIC DESCRIPTION AND OTHER TRANSPORT INFORMATION

- **DEPARTMENT OF TRANSPORTATION HAZARDOUS MATERIALS SHIPPING REGULATIONS:**

UN/NA Number	Proper Shipping Name	Packing Group	Hazard Class	Label	North American Emergency Response Guide #	Marine Pollutant Status
NOT APPLICABLE						

SECTION 14: TRANSPORT INFORMATION (Continued)

- **IATA DESIGNATION:** This product is not regulated as dangerous goods by the International Air Transport Association.
 - **IMO DESIGNATION:** This product is not regulated as dangerous goods by the International Maritime Organization.
- 14.2 **ENVIRONMENTAL HAZARDS**
- None described, as related to transportation.
- 14.3 **SPECIAL PRECAUTIONS FOR USERS**
- Not applicable.
- 14.4 **TRANSPORT IN BULK**
- Not applicable.

SECTION 15: REGULATORY INFORMATION

Unless stated, information in this section is for both **Product as SOLD** and **Product at USE DILUTION**.

15.1 **SAFETY, HEALTH, AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE PRODUCT**

- **OTHER IMPORTANT U.S. REGULATIONS**
 - **U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21):** ACUTE: No; CHRONIC: No; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No
 - **U.S. CERCLA REPORTABLE QUANTITY (RQ):** Not applicable.
 - **U.S. TSCA INVENTORY STATUS:** All components of this product are listed on the TSCA Inventory.
 - **CALIFORNIA SAFE DRINKING WATER ACT (PROPOSITION 65) STATUS:** Not applicable.
- **INTERNATIONAL REGULATIONS**
 - **CANADIAN REGULATORY STATUS:** The **PRODUCT as SOLD** is not classified as hazardous under Canadian Controlled Products regulations (SOR-88-66).
 - This SDS contains all the information required by the CPR.
 - **CANADIAN DSL/NDSL INVENTORY STATUS:** The listed components of this product are on the DSL/NDSL Inventory.
 - **CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priorities Substances Lists.
 - **GERMAN WATER HAZARD CLASSIFICATION:** 1 (low hazard to waters).

SECTION 16: OTHER INFORMATION

16.1 **INDICATION OF CHANGE**

- **DATE OF REVISION:** April 27, 2015
- **SUPERCEDES:** April 1, 2015
- **CHANGE INDICATED:** Formulation modification.

16.2 **KEY LITERATURE REFERENCES AND SOURCES FOR DATA**

- SAFETY DATA SHEETS FOR COMPONENT PRODUCTS.
- Federal OSHA Hazard Communication Standard: 29 CFR 1910.1200.
- SAX – Dangerous Properties of Industrial Materials
- RTECS – Registry of Effects of Toxic Chemicals
- European Chemicals Inventory Classification and Listing: <http://echa.europa.eu>

SECTION 16: OTHER INFORMATION (Continued)

16.3 HAZARDOUS MATERIALS CLASSIFICATION SYSTEM

Product as SOLD			Product at USE DILUTION		
Health	1	HMIS Personal Protective	Health	0	HMIS Personal Protective
Flammability	0	Equipment Rating: Occupational Use	Flammability	0	Equipment Rating: Occupational Use situations: B
Physical Hazard	0	situations: B - Safety glasses and gloves.	Physical Hazard	0	- Safety glasses and gloves.
Protective Equipment	B		Protective Equipment	B	

16.4 DISCLAIMER

WAXIE Sanitary Supply makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of their own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by WAXIE Sanitary Supply as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does WAXIE Sanitary Supply assume any liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. WAXIE Sanitary Supply does not recommend blending this product with any other chemicals. All information, recommendations and data contained herein concerning this product are based upon information available at the time of writing from recognized technical sources.

16.5 ABBREVIATIONS AND ACRONYMS

ALL SECTIONS: **OSHA:** U.S. Federal Occupational Safety and Health Administration. **WHMIS:** Canadian Workplace Hazardous Materials Standard. **GHS:** Globally Harmonized System of Classification of Chemical Substances. **REACH:** European Union regulation, Registration, Evaluation, Authorization and Restriction of Chemical substances.

SECTION 2: **CAS Number:** Chemical Abstract Service Number, which is used by the American chemical Society to uniquely identify a chemical.

SECTION 5: **NFPA:** National Fire Protection Association. **NFPA FLAMMABILITY CLASSIFICATION:** The NFPA uses the flash point (F.P.) and boiling point (BP) to classify flammable or combustible liquids. Class IA: F.P. below 73°F and BP below 100°F. Class IB: F.P. below 73°F and BP at or above 100°F. Class IC: F.P. at or above 73°F and BP at or above 100°F. Class II: F.P. at or above 100°F and below 140°F. Class IIIA: F.P. at or above 140°F and below 200°F. Class IIIB: F.P. at or above 200°F. **NFPA HAZARDOUS MATERIALS RATING:** This is a rating system used to summarize physical and health hazards to firefighters. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

SECTION 8: **NE:** Not established. **ACGIH:** American Conference of Government Industrial Hygienists; **TWA:** Time-Weighted Average (over an 8-hour work day); **STEL:** Short-Term Exposure Limit (15 minute average, no more than 4-times daily and each exposure separated by one-hour minimally); **C:** Ceiling Limit (concentration not to be exceeded in a work environment). **PEL:** Permissible Exposure Limit. **NIOSH:** National Institute of Occupational Safety and Health; **REL:** Recommended Exposure Limit; **IDLH:** Immediately Dangerous to Life and Health Concentrations. *Note:* In July 1992, a court ruling vacated the more protective PELs set by OSHA in 1989. Because OSHA may enforce the more protective levels under the "general duty clause", both the current and vacated levels are presented in this document. **ppm:** Parts per Million. **mg/m³:** Milligrams per cubic meter. **mppcf:** Millions of Particles per Cubic Foot, **BEI:** Biological Exposure Limit.

SECTION 9: **pH:** Scale (0 to 14) used to rate the acidity or alkalinity of aqueous solutions. For example, a pH value of 0 indicates a strongly acidic solution, pH of 7 indicates a neutral solution, and a pH value of 14 indicates an extremely basic solution. **FLASH POINT:** Temperature at which a liquid generates enough flammable vapors so that ignition may occur. **AUTOIGNITION TEMPERATURE:** Temperature at which spontaneous ignition occurs.

SECTION 9 (Continued): **LOWER EXPLOSIVE LIMIT (LEL):** The minimal concentration of flammable vapors in air which will sustain ignition. **UPPER EXPLOSIVE LIMIT (UEL):** The maximum concentration of flammable vapors in air which will sustain ignition. **≈:** Approximately symbol. **VOC:** Volatile Organic Compound.

SECTION 11: **CARCINOGENICITY STATUS:** **NTP:** National Toxicology Program. **IARC:** International Agency for Research on Cancer. **REPRODUCTIVE TOXICITY INFORMATION:** **Mutagen:** Substance capable of causing chromosomal damage to cells. **Embryotoxin:** Substance capable of damaging the developing embryo in an overexposed female. **Teratogen:** Substance capable of damaging the developing fetus in an overexposed female. **Reproductive toxin:** Substance capable of adversely affecting male or female reproductive organs or functions. **TOXICOLOGY DATA:** **LD₅₀ or LC₅₀:** The Lethal Dose or Lethal Concentration of a substance which will be fatal to a given percentage (xx) of exposed test animals by the designate route of administration. This value is used to access the toxicity of chemical substances to humans. **TD₅₀ or TC₅₀:** The Toxic Dose or Toxic Concentration of a substance which will cause an adverse effect to a given percentage (xx) of exposed test animals by the designate route of administration.

SECTION 12: **EC50:** Effect Concentration (on 50% of study group); **BOD:** Biological Oxygen Demand.

SECTION 13: **RCRA:** Resource Conservation and Recovery Act. The regulations promulgated under this act under Act are found in 40 CFR, Sections 260 ff, and define the requirements of hazardous waste generation, transport, treatment, storage, and disposal. **EPA RCRA Waste Codes:** Defined in 40 CFR Section 261.

SECTION 15: **CERCLA:** Comprehensive Environmental Response Compensation and Liability Act (a.k.a. "Superfund") and **SARA:** (Superfund Amendment and Reauthorization Act). The regulations promulgated under this Act are located under 40 CFR 300 ff. and provide "community right-to-know" requirements. **TSCA:** Toxic Substances Control Act: Rules regulating the manufacture and sale of chemicals found in 40 CFR 700-766. **DSL/NDSL:** Canadian Domestic Substances and Non-Domestic Substances Lists.

SECTION 16: **HAZARDOUS MATERIALS IDENTIFICATION SYSTEM RATING:** This is a rating system used by industry to summarize physical and health hazards to chemical users and was originally developed by the National Paint and Coating Association. 0 = No Significant Hazard. 1 = Slight Hazard. 2 = Moderate Hazard. 3 = Severe Hazard. 4 = Extreme Hazard.

Cleaner (All-Purpose)



SAFETY DATA SHEET

#710 Multi-Purpose Disinfectant Cleaner Concentrated

Page: 1

Printed: 05/09/2014

Revision: 05/09/2014

Supersedes Revision: 08/01/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 170401
 Product Name: #710 Multi-Purpose Disinfectant Cleaner - Concentrated
 Company Name: Waxie Sanitary Supply Phone Number: 1 (800)995-4466
 9353 Waxie Way
 San Diego, CA 92123-1036
 Web site address: www.waxie.com
 Emergency Contact: Chem-Tel 1 (800)255-3924
 Information:

2. HAZARDS IDENTIFICATION

Flammable Liquids, Category 4
 Acute Toxicity: Oral, Category 4
 Acute Toxicity: Skin, Category 4
 Skin Corrosion/Irritation, Category 2
 Aquatic Toxicity (Acute), Category 2



Warning

GHS Hazard Phrases: H227 - Combustible liquid.
 H302 - Harmful if swallowed.
 H312 - Harmful in contact with skin.
 H315 - Causes skin irritation.
 H401 - Toxic to aquatic life.

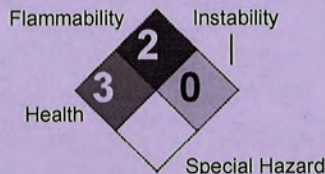
GHS Precaution Phrases: P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P273 - Avoid release to the environment.

GHS Response Phrases: P370+378 - In case of fire, use ... to extinguish.
 P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P330 - Rinse mouth.
 P302+352 - IF ON SKIN: Wash with plenty of soap and water.
 P312 - Call a POISON CENTER/doctor/... if you feel unwell.
 P322 - Specific measures see ... on this label.
 P363 - Wash contaminated clothing before reuse.
 P321 - Specific treatment see ... on this label.
 P332+313 - If skin irritation occurs, get medical advice/attention.
 P362 - Take off contaminated clothing.

GHS Storage and Disposal Phrases: P403+235 - Store in cool/well-ventilated place.
 P501 - Dispose of contents/container to

Hazard Rating System:

HEALTH	3
FLAMMABILITY	2
PHYSICAL	0
PPE	B



Potential Health Effects (Acute and Chronic):

Chronic: May cause reproductive and fetal effects. Laboratory experiments have shown mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage.

Inhalation:

May cause severe irritation of the respiratory tract with possible burns. Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

Skin Contact:

Causes skin burns. May be harmful if absorbed through the skin. Causes moderate skin irritation. May cause cyanosis of the extremities.

Eye Contact:

Causes eye burns. Causes severe eye irritation. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Ingestion:

Harmful if swallowed. May cause severe and permanent damage to the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Proprietary
68424-95-3	Octyl decyl dimethyl ammonium chloride	Proprietary
64-17-5	Ethyl alcohol	Proprietary
5538-94-3	1-Octanaminium, N,N-Dimethyl-N-octyl-, chloride	Proprietary
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	Proprietary

4. FIRST AID MEASURES**Emergency and First Aid****Procedures:**

Get medical aid immediately. Remove from exposure and move to fresh air immediately.

In Case of Inhalation:

If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

In Case of Skin Contact:

Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure. Destroy contaminated shoes. Get medical aid. Wash clothing before reuse.

In Case of Eye Contact:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Gently lift eyelids and flush continuously with water.

In Case of Ingestion:

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Note to Physician:

Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.

Antidote: Replace fluid and electrolytes.

5. FIRE FIGHTING MEASURES**Flash Pt:**

130 F (54.4 C)

Explosive Limits:

LEL: N.E. UEL: N.E.

Autoignition Pt:

No data.

Suitable Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

Fire Fighting Instructions:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Replace fluid and electrolytes. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint.

Flammable Properties and Hazards:

No data available.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Provide ventilation. Remove all sources of ignition. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes. Use only in a well-ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Precautions To Be Taken in Storing: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from heat, sparks and flame. Keep away from sources of ignition. Keep from contact with oxidizing materials. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
68424-85-1	Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	No data.	No data.	No data.
68424-95-3	Octyl decyl dimethyl ammonium chloride	No data.	No data.	No data.
64-17-5	Ethyl alcohol	PEL: 1000 ppm	TLV: 1000 ppm	No data.
5538-94-3	1-Octanaminium, N,N-Dimethyl-N-octyl-, chloride	No data.	No data.	No data.
7173-51-5	1-Decanaminium, N-Decyl-N,N-dimethyl-, chloride	No data.	No data.	No data.

Respiratory Equipment (Specify Type): A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a res must be followed whenever workplace conditions warrant respirator use.

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls (Ventilation etc.): Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: [] Gas [X] Liquid [] Solid
Appearance and Odor: Yellow color liquid with citrus fragrance.
Melting Point: No data.
Boiling Point: > 210 F (100.0 C)
Autoignition Pt: No data.
Flash Pt: 130 F (54.4 C)
Explosive Limits: LEL: N.E. UEL: N.E.
Specific Gravity (Water = 1): 1.019
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate: No data.
Solubility in Water: 100%
pH: 6 - 8
Percent Volatile: No data.
VOC / Volume: < 51 G/L

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: None.
Incompatibility - Materials To Avoid: Strong oxidizers, open flame, heat and sparks.
Hazardous Decomposition Or Byproducts: Hydrogen chloride, chlorine, Carbon monoxide, Carbon dioxide, nitrogen oxides (NOx) and ammonia (NH3). irritating and toxic fumes and gases.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: None.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 320007
Product Name: Waxie-Green #243 Green Neutral Cleaner - Concentrated
Company Name: Waxie Sanitary Supply **Phone Number:**
 9353 Waxie Way 1 (800)995-4466
 San Diego, CA 92123-1036
Web site address: www.waxie.com
Emergency Contact: Chem-Tel 1 (800)255-3924
Information:

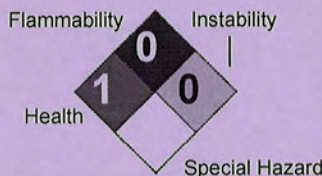
2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 5
Skin Corrosion/Irritation, Category 3

GHS Hazard Phrases: H303 - May be harmful if swallowed.
 H316 - Causes mild skin irritation.
GHS Precaution Phrases: No phrases apply.
GHS Response Phrases: P312 - Call a POISON CENTER/doctor/... if you feel unwell.
 P332+313 - If skin irritation occurs, get medical advice/attention.
GHS Storage and Disposal Phrases: No phrases apply.

Hazard Rating System:

HEALTH	1
FLAMMABILITY	0
PHYSICAL	0
PPE	B



Potential Health Effects (Acute and Chronic):

Inhalation: Breathing vapors and spray mist can be irritating to nose, throat, lungs and respiratory tract.
Skin Contact: Prolonged skin contact can cause slight irritation and drying of the skin. Avoid any skin contact.
Eye Contact: May cause eye irritation. Avoid any eye contact.
Ingestion: Can cause irritation to mouth, throat, stomach and mucous membranes. Nausea, dizziness, headache, stomach ache or pain, diarrhea.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
68439-46-3	Alcohol ethoxylate	Proprietary
68-04-2	Citric acid, Trisodium salt dihydrate	Proprietary

4. FIRST AID MEASURES**Emergency and First Aid**

Procedures: Remove from exposure and move to fresh air immediately. If unconscious, call a physician.

In Case of Inhalation: Remove from exposure and move to fresh air immediately. If unconscious, call a physician.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

In Case of Ingestion: Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Get medical aid if irritation or symptoms occur.

Note to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Pt: No data.

Explosive Limits: LEL: N.E. UEL: N.E.

Autoignition Pt: No data.

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Fire Fighting Instructions: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

Flammable Properties and Hazards: No data available.

6. ACCIDENTAL RELEASE MEASURES

Steps To Be Taken In Case Material Is Released Or Spilled: Use proper personal protective equipment as indicated in Section 8. Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

Precautions To Be Taken in Storing: Store in a cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
68439-46-3	Alcohol ethoxylate	No data.	No data.	No data.
68-04-2	Citric acid, Trisodium salt dihydrate	No data.	No data.	No data.

Respiratory Equipment (Specify Type): Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Eye Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Protective Gloves: Wear appropriate protective gloves to prevent skin exposure.

Other Protective Clothing: Wear appropriate protective clothing to prevent skin exposure.

Engineering Controls
(Ventilation etc.):

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: [] Gas [] Liquid [X] Solid
Appearance and Odor: Yellow color liquid with fruity fragrance.
Melting Point: No data.
Boiling Point: > 210 F (100.0 C)
Autoignition Pt: No data.
Flash Pt: No data.
Explosive Limits: LEL: N.E. UEL: N.E.
Specific Gravity (Water = 1): 1.014
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Evaporation Rate: No data.
Solubility in Water: 100%
pH: 6 - 8
Percent Volatile: No data.
VOC / Volume: 0 G/L

10. STABILITY AND REACTIVITY

Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: Incompatible materials, dust generation, Exposure to moist air or water.
Incompatibility - Materials To Avoid: Strong oxidizing agents, Strong acids.
Hazardous Decomposition Or Byproducts: Carbon monoxide, Carbon dioxide.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: None.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: Epidemiology: No information found.
Teratogenicity: No information available. Reproductive Effects: Mutagenicity:
Neurotoxicity:

Carcinogenicity/Other Information: CAS# 68-04-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
68439-46-3	Alcohol ethoxylate	n.a.	n.a.	n.a.	n.a.
68-04-2	Citric acid, Trisodium salt dihydrate	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

General Ecological Information: Environmental: No information available.
Physical: No information available.
Other: Do not empty into drains.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. TRANSPORT INFORMATION

GHS Classification: Acute Toxicity: Oral, Category 5 - Warning! May be harmful if swallowed
Skin Corrosion/Irritation, Category 3 - Warning! Causes mild skin irritation

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: NOT REGULATED FOR DOMESTIC TRANSPORT.

DOT Hazard Class:

UN/NA Number:

15. REGULATORY INFORMATION

This material meets the EPA [] Yes [X] No Acute (immediate) Health Hazard
'Hazard Categories' defined [] Yes [X] No Chronic (delayed) Health Hazard
for SARA Title III Sections [] Yes [X] No Fire Hazard
311/312 as indicated: [] Yes [X] No Sudden Release of Pressure Hazard
[] Yes [X] No Reactive Hazard

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
68439-46-3	Alcohol ethoxylate	CA PROP.65: No; CA TAC, Title 8: No
68-04-2	Citric acid, Trisodium salt dihydrate	CA PROP.65: No; CA TAC, Title 8: No

16. OTHER INFORMATION

Revision Date: 08/22/2013

Additional Information About This Product: This product is certified as biodegradable by Ecologo/UL.

This Product:

Company Policy or Disclaimer:

Waxie believes the data set forth are accurate, Waxie makes no warranty with respects thereto and disclaims all liability for reliance thereon. Such data are offered solely for consideration, investigation and verification. Also, the data set forth is for the concentrated finished product. All lab samples are for experimental purposes only and used at the customers discretion.

Cleaner / Disinfectant



Spartan Chemical Company, Inc. Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
GREEN SOLUTIONS ALL PURPOSE CLEANER
Product Number: 3501
2-Liter Cartridge 101: 3511

Product Division:
Janitorial

Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990
Medical Emergency: 1-(888)-314-6171 (24 hours)
Chemical Leak/Spil Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Cleaning compounds, liquid, n.o.s.

NFPA Ratings:	HMIS Ratings:
Health: 2 - Moderate Fire: 0 - Minimal Reactivity: 0 - Minimal	Health: 2 - Moderate Fire: 0 - Minimal Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			NTP, IARC or OSHA Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
Alkyl polyglycoside	1-5	132778-08-6	Not Established	Not Established	Not Established	No
Sodium carbonate	1-5	497-19-8	Not Established	Not Established	Not Established	No
Polyethylene glycol propoxylated	1-5	9003-11-6	Not Established	Not Established	Not Established	No
Citric Acid	1-5	77-92-9	Not Established	Not Established	Not Established	No
Alcohol ethoxylate	1-5	68439-46-3	Not Established	Not Established	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point: 212 °F	Vapor Pressure: Unknown
Vapor Density (AIR = 1): Unknown	Solubility in Water: Complete
pH: 7.0-8.0	Specific Gravity (H ₂ O=1): 1.01 @ 75 F
Evaporation Rate (but.ace.=1): <1	Percent Solid by Weight: 5-10%
Physical State: Liquid	
Appearance & Odor: Clear liquid, mild odor.	

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: >212 °F	Method Used: Estimate
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Product does not support combustion. Use extinguishing media appropriate for surrounding fire.	
Special Fire Fighting Procedures: Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.	
Unusual Fire & Explosive Hazards: Combustion products are toxic.	

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value: Not established

Primary Routes of Entry: Inhalation, Skin Contact, Eyes; Oral

Effects of Overexposure- **Causes eye irritation:** Symptoms may include pain, redness, swelling and tearing
 Conditions to Avoid: **Causes skin irritation:** Symptoms may include pain, redness and swelling.
May be harmful if swallowed: Symptoms may include nausea, vomiting, pain and diarrhea.
Inhalation of product mist may cause respiratory irritation: Symptoms may include coughing and difficulty breathing.
Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid breathing product mist.

Conditions Aggravated by Use: Use of this product may aggravate preexisting eye; skin and respiratory disorders such as asthma and dermatitis.

Emergency & First Aid Procedures:

Eyes: Flush eyes with water for at least 15 minutes. Remove contact lenses. Get medical attention.

Skin: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Wash contaminated clothing before reuse.

Ingestion: Do not induce vomiting unless advised by physician or poison control center. Drink one or two glasses of water to dilute product. Get medical attention. Do not give anything by mouth to an unconscious person.

Inhalation: Move person to fresh air. Get medical attention if irritation persists.

SECTION VI: REACTIVITY DATA

Stability: Stable

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide

Hazardous Polymerization: Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES**Steps to be Taken in Case**

Material is Released or Spilled: Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (if permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for recovery or disposal.

Waste Disposal Method: Same as above.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not normally required when good general ventilation is provided. However if respiratory irritation occurs; the use of a NIOSH approved respirator suitable for the use-conditions and chemicals in Section II should be considered.

Ventilation: Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.

Protective Gloves(Specify Type): Impervious rubber or other waterproof gloves are recommended.

Eye Protection(Specify Type): Splash goggles are recommended to prevent eye contact.

Other Protective Equipment: See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing: Wash thoroughly with soap and water after handling.

Other Precautions: Keep out of reach of children.

© SCC 09/22/2008

Name: Ronald T. Cook

Title: Manager, Regulatory Affairs

GREEN SOLUTIONS ALL PURPOSE
CLEANER

Effective Date: 09/22/2008

Supercedes: 06/30/2005

Ref: 29 CFR 1910.1200 (OSHA)

Changes: Update Section V

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained herein. Actual conditions of use and handling are beyond sellers control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State and Local laws and regulations.

Correction Fluid
(White-Out)

MATERIAL SAFETY DATA SHEET

MSDS # 45001-A

Section One: Identification

Sanford, L.P.
2707 Butterfield Road
Oak Brook, IL 60523 USA
800-323-0749 or 630-481-2000

EMERGENCY MEDICAL NUMBER:

888-786-0972

Product Name: Office Depot Multi-Purpose White Correction Fluid

Section Two: Hazard Identification

WARNING: FLAMMABLE. PRECAUTIONS: Do not store or use near heat or flame. KEEP OUT OF REACH OF CHILDREN.

Section Three: Composition

Titanium dioxide (13563-67-7), solvent naphtha (64742-89-8), mineral spirits (64742-48-9), resins, dispersant, colorants, fragrance

Section Four: First Aid Measures

Inhalation: This product is considered safe under normal use conditions.
Skin Contact: Wash with soap and water.
Eye Contact: Irritation may occur. Wash thoroughly with water.
Ingestion: Contact a physician. NOTE TO PHYSICIAN: Contains solvent naphtha and mineral spirits, which may cause chemical pneumonitis.

Section Five: Fire Fighting Measures

Flash Point: 27F (Closed Cup)
Flammability Limits (% by volume): Lower: 1% Upper: 8%
Extinguishing Media: Dry chemical, foam, carbon dioxide.
Special Fire Fighting Measures: In fires involving large quantities, use self-contained breathing apparatus. Cool fire-exposed containers with water spray/fog.
Unusual Fire and Explosion Hazards: Product is flammable. May produce hazardous decomposition products.

Section Six: Accidental Release Measures

In Case of Spill or Accidental Release: Wipe up with absorbent material.

Section Seven: Handling and Storage

Handling: Do not store or use near heat or flame.
Storage: In large quantities, store in a well-ventilated area.

Section Eight: Exposure Controls and Personal Protection

Eye Protection: None under normal use conditions.
Clothing: None under normal use conditions.
Respirator: None under normal use conditions.
Ventilation: None under normal use conditions.

Section Nine: Physical and Chemical Properties

For product unless otherwise specified:

Boiling Point: 209 - 230F
 Specific Gravity: ~1.2
 Vapor Pressure: 124 mm Hg at 100F
 Solubility in Water: Negligible
 Evaporation Rate: 3.6 (butyl acetate = 1)
 Appearance/Odor: White fluid; solvent odor

Section Ten: Stability and Reactivity

Stability: Stable
 Conditions to Avoid: Open flames or other ignition sources.
 Chemical Incompatibility: Strong oxidizers
 Hazardous Decomposition: May produce oxides of carbon, nitrogen, and various hydrocarbons in fire.
 Hazardous Polymerization: Will not occur

Section Eleven: Toxicological Information

See Section Two: Hazard Identification for any hazards

Section Twelve: Ecological Information

Not available

Section Thirteen: Disposal Considerations

Dispose in accordance with Federal, State, and Local Regulations.

Section Fourteen: Transport Information

DOT: ORM-D Consumer Commodity
 IATA: Consumer Commodity, 9, ID8000
 IMO: UN1993, NOS(Petroleum Distillates), Class 3, PGII, Ltd. Qtys. IMDG Emergency Code: EmS#3-07

Section Fifteen: Regulatory Information

TSCA: The product listed on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory

Section Sixteen: Other Information

HMIS Code	
Health	2
Flammability	3
Reactivity	0
Personal Protection	N/A

0=Minimal / 4 = Severe

Sanford has been advised by Counsel that the OSHA Hazard Communication Standard does not apply to the Sanford Product described in this Material Safety Data Sheet. The reason for the exemption is contained in 29 CFR 1910.1200(b)(6)(ix) as amended July 1, 2006 per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard nor is this MSDS meant to comply with all requirements of the Hazard Communication Standard.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 480.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Magnesium Sulfate Heptahydrate (Epsom Salt)

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Magnesium sulfate heptahydrate	10034-99-8	MgSO ₄ ·7H ₂ O	246.50	
Synonym: Epsom salts				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None

established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area and sweep up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Slightly hygroscopic. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder. Odorless.
Soluble: Water and glycerol

Specific gravity: 1.678

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, abdominal pain.

ORL-RAT LD₅₀: N.A.

Chronic effects: N.A.

IHL-RAT LC₅₀: N.A.

Target organs: Central nervous system, GI system.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-298-2).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 326.20

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ethyl Alcohol Solution, 70%

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

Hazard class: Specific target organ toxicity, single exposure (Category 1). Causes damage to organs (H370). Addition of denaturant makes the product poisonous. Cannot be made nonpoisonous.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Ethyl alcohol, denatured	64-17-5	C ₂ H ₅ OH	46.07	55%
Isopropyl alcohol	67-63-0	C ₃ H ₈ O	60.10	10%
Methyl alcohol	67-56-1	CH ₃ OH	32.04	5%
Water	7732-18-5	H ₂ O	18.00	30%

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Call a POISON CENTER or physician (P309+P313).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid.

Flash point: 13 °C Flammable limits: Lower: 1.4% Upper: 36.0%

When heated, releases flammable fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

H-2

F-3

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.

Keep container tightly closed and cool (P233+P235). Use explosion-proof electrical and ventilating equipment (P241). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: (as ethyl alcohol) PEL 1000 ppm (OSHA), Ceiling 1000 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear liquid. Alcohol odor.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Excellent, if stored safely.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritation, nausea, dizziness, headache.

ORL-RAT LD₅₀: 7060 mg/kg (as ethyl alcohol)

Chronic effects: Liver damage, reproductive, teratogenic effects, carcinogen.

IHL-RAT LC₅₀: 20,000 ppm/10H (as ethyl alcohol)

Target organs: Eyes, skin, central nervous system, liver, reproductive system.

SKN-RBT LD₅₀: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Flammable Liquids, N.O.S. (Contains Ethyl Alcohol). Flammable Liquid, 3. UN1993, PG II.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

Section One: Identification

Sanford, L.P.
2707 Butterfield Road
Oak Brook, IL 60523 USA
800-323-0749 or 630-481-2000

EMERGENCY MEDICAL NUMBER:

888-786-0972

Product Name: Expo White Board Cleaner, Expo Original Cleaner

Colors: Clear

Sanford is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236 and is labeled with the CL (Cautionary Label) Seal. Products bearing the CL Seal are certified to be properly labeled in a program of toxicological evaluation by a medical expert for any known health risks and with information on safe and proper use of these materials. Conforms to ASTM D-4236.

Section Two: Hazard Identification

WARNING: COMBUSTIBLE. VAPOR HARMFUL. MAY BE HARMFUL IF SWALLOWED, OR BY SKIN CONTACT. EYE IRRITANT. CONTAINS: 2-BUTOXYETHANOL, ISOPROPYL ALCOHOL. PRECAUTIONS: Avoid ingestion. Keep away from eyes. Do not store or use near heat or flame. Use only with adequate ventilation. KEEP OUT OF REACH OF CHILDREN. FIRST AID: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care. If skin contact occurs, wash with soap and water for 5 minutes. If swallowed, get prompt medical attention. For further health information, contact a poison control center or call 888-786-0972.

Section Three: Composition

Water, 2-Butoxyethanol (111-76-2), isopropyl alcohol (67-63-0)

Section Four: First Aid Measures

Inhalation: If symptoms occur, move to fresh air.
Skin Contact: If skin contact occurs, wash with soap and water for 5 minutes.
Eye Contact: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care.
Ingestion: If swallowed, get prompt medical attention.

Section Five: Fire Fighting Measures

Flash Point: 105F (TCC)
Flammability Limits (% by volume): Lower: 2.2% (isopropyl alcohol) Upper: Not available
Extinguishing Media: As appropriate for surrounding area.
Special Fire Fighting Measures: None
Unusual Fire and Explosion Hazards: None

Section Six: Accidental Release Measures

In Case of Spill or Accidental Release: Wipe up with absorbent material.

Section Seven: Handling and Storage

Handling: Use in a well-ventilated area. Aim nozzle away from eyes.
Storage: Do not store or use near heat or flame.

Section Eight: Exposure Controls and Personal Protection

Eye Protection: None under normal use conditions. Avoid prolonged eye contact.
Clothing: None under normal use conditions.
Respirator: None under normal use conditions.
Ventilation: None under normal use conditions. Use in a well ventilated area.

Section Nine: Physical and Chemical Properties

For product unless otherwise specified:

Boiling Point: 180F (isopropyl alcohol)
 Specific Gravity: 0.96
 Vapor Pressure: 33 mg Hg (isopropyl alcohol)
 Solubility in Water: complete
 Evaporation Rate: Not available
 Appearance/Odor: Clear liquid; alcoholic odor

Section Ten: Stability and Reactivity

Stability: Stable
 Conditions to Avoid: None known
 Chemical Incompatibility: Strong oxidizers, acids, isocyanates
 Hazardous Decomposition: None known
 Hazardous Polymerization: Will not occur.

Section Eleven: Toxicological Information

See Section Two: Hazard Identification for any hazards

Section Twelve: Ecological Information

Not available

Section Thirteen: Disposal Considerations

Dispose in accordance with Federal, State, and Local Regulations.

Section Fourteen: Transport Information

DOT: ORM-D Consumer Commodity
 IATA: Consumer Commodity, 9, ID8000, packing instruction 910
 IMO: Flammable Liquid, n.o.s. (isopropanol), 3, UN1993, PGIII (105F TCC), Ltd. Qty, EmS#3-07

Section Fifteen: Regulatory Information

TSCA: The product listed on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory

Section Sixteen: Other Information

HMIS Code	
Health	2
Flammability	2
Reactivity	0
Personal Protection	H

0=Minimal / 4 = Severe

Sanford has been advised by Counsel that the OSHA Hazard Communication Standard does not apply to the Sanford Product described in this Material Safety Data Sheet. The reason for the exemption is contained in 29 CFR 1910.1200(b)(6)(ix) as amended July 1, 2006 per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard nor is this MSDS meant to comply with all requirements of the Hazard Communication Standard.

Fire extinguisher

MATERIAL SAFETY DATA SHEET

Diemasters Date prepared 3/01/03
PO Box 219, Skiatook, OK 74070 Supersedes: 5/01/95
Phone 800-826-2134 Emergency day/night phone: CHEMTREC 800-424-9300

<> IDENTIFICATION <>

Product name: METAL.FIRE.XTNGSHR (copyright trade name)
Synonyms: class D powder, G1 powder, mag.fire.xtngshr (all are fire fighting media)

<> HMIS RATING <>

Table with 2 columns: Health/Flammability/Reactivity and HMIS HAZARD INDEX (Minimal, Slight, Moderate, Serious, Severe)

<>HEALTH EFFECTS AND FIRST AID <>

EFFECTS OF ACUTE OVEREXPOSURE TO PRODUCT:
EYES: Irritant
SKIN: Slight irritant
SWALLOWING: Ingestion of large amounts may cause nausea and vomiting
BREATHING: Prolonged and repeated overexposure may lead to benign pneumoconiosis.

FIRST AID IF:

IN EYES: Flush with water for 15 minutes*
ON SKIN: Wash with soap and water*
BREATHED: Go to fresh air*
SWALLOWED: Rinse mouth, drink large amounts of water, induce vomiting*
* If discomfort continues seek medical attention

PRIMARY ROUTES OF ENTRY: Eyes, skin contact, breathing, swallowing

MEDICAL CONDITIONS AGGRIVATED BY OVEREXPOSURE: Emphysema & asthma

EFFECTS OF CHRONIC OVEREXPOSURE TO PRODUCT: None known

PRODUCT LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?

NATIONAL TOXOLOGY PROGRAM: No. IARC MONOGRAPHS: No. OSHA: No.

<> HAZARDOUS INGREDIENTS <>

Table with 4 columns: Material, CAS No., OSHA PEL, ACGIH TLV. Rows include Graphite (synthetic), KAOLIN, and MICA.

*(c) Total dust containing no asbestos and less than 1% crystalline silica

<> OTHER INGREDIENTS <>

<u>Material</u>	<u>CAS No.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
SODIUM CHLORIDE	7647-14-5	10 total dust (a)* 5 respirable fraction	10 (b)*
HYDROS ALUMINA SILICATE	1318-94-1	10 total dust (a) 5 respirable fraction	10 (b)*

(a) Particulate matter not otherwise classified. Milligrams substance per cubic meter of air.

(b) Particulate matter not otherwise classified. Total dust containing no asbestos and less than 1% crystalline silica.

<> PHYSICAL & CHEMICAL CHARACTERISTICS <>

BOILING POINT: 2575°F	SPECIFIC GRAVITY: 2.18	VAPOR PRESSURE: N/A
PERCENT VOLITILE: N/A	VAPOR DENSITY: N/A	EVAPORATION RATE: N/A
SOLUBILITY IN WATER: Slight		MELTING POINT: N/A
pH: 7.0	FLASH POINT: N/A	AUTO IGNITION: N/A

APPEARANCE and ODOR: Mixture of white and dark gray-black crystalline powder. No characteristic odor.

FIRE EXTINGUISHER MEDIA: None. This material is an extinguishing agent for CLASS D fires (metal fires).

SPECIAL FIRE FIGHTING PROCEDURES: None FIRE AND EXPLOSION HAZARD: None

<> PHYSICAL HAZARDS <>

STABILITY: Stable	CONDITIONS TO AVOID: N/A
INCOMPATIBILITY (materials to avoid): Bromine Trifluoride	
HAZARDOUS DECOMPOSITION (when heated to decomposition): CO, CO ₂ , CL ₂ and NA ₂ O	
HAZARDOUS POLYMERIZATION: Will not occur.	

<> SPECIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES <>

STEPS TO BE TAKEN IF PRODUCT IS RELEASED OR SPILLED: Sweep up and contain. Dispose of in accordance with local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep dry. Do not cross contaminate with other fire extinguisher agents.

End of page 2. End of MSDS

MATERIAL SAFETY DATA SHEET

Flax Seed Meal
AHC Products, Inc.

PRODUCT NAME: (As used on label and list): Flax Seed Meal

This Material Safety Data Sheet is being provided to your company, for the purpose of providing current health and safety information to your management and employees who work with this product. Please read the data provided and then provide it to those individuals at your company who have the responsibility to insure compliance with both Federal and State Right to Know regulations, and to those employees that request information on this product.

Federal Regulations: Parts 29 and 42 Code of Federal Regulations

Date Prepared: 08/2009

SECTION I – PRODUCT IDENTIFICATION

MANUFACTURER: AHC Products, Inc.

AHC Products, Inc.

301 West Broadway

Winchester, Kentucky

859/737-3441

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENT (Specific Chemical Identity; Common Names):

Non-hazardous – feed grade ingredients

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR: Free flowing brown/golden granules with a vegetable oil odor.

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing.

Avoid any method which will create dust clouds.

EXTINGUISHING MEDIA: Use water fog or water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Carbon Monoxide and Carbon Dioxide on combustion.

EXPOSITION DATA: Powdered material may form an explosive dust-air mixture.

FLASH POINT: none

SECTION V – REACTIVITY DATA

STABILITY: Very Stable

INCOMPATIBILITY/MATERIALS TO AVOID: Strong Oxidizing Agents.

HAZARDOUS POLYMERIZATION: none

SECTION VI – HEALTH HAZARD DATA

HEALTH HAZARDS (ACUTE AND CHRONIC): Not considered hazardous for inhalation and ingestion at normal use.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: May cause irritation. Flush with copious amounts of water for 15 minutes. Call a physician if irritation persists.

SKIN: If irritation occurs, wash with soap and water. Call a physician if irritation persists.

INGESTED: Ingestion of large quantities may cause gastro-intestinal discomfort including flatulence. In cases of persistent or severe symptoms seek medical attention.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STORAGE: Store in multi-walled poly lined paper bags at 22°C/71°F. Powdered material may form a dust-air mixture. Minimize dust generation and accumulation during use.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Collect and contain for salvage or disposal. Avoid procedures which cause a dust cloud to be formed.

WASTE DISPOSAL METHOD: In accordance with federal, state and local laws.

SECTION VIII – CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFIC TYPE): NIOSH/MSHA approved dust mask.

VENTILATION: recommend 10 air changes per hour for good ventilation.

PROTECTIVE GLOVES: rubber

EYE PROTECTION: Dust resistance safety goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Eye baths and emergency shower.

WORK AND/OR HYGIENIC PRACTICES: Practice standard good hygiene.

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 350.90

Revision Date: March 26, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Flour

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word N/A

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Flour	None established	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

If on skin: Wash with plenty of water.

If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE

None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous.
Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.
Exposure guidelines: (as flour dust) TLV 0.5 mg/m³ (ACGIH). Respiratory sensitizer.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White or off-white powder. Characteristic odor. Not for human consumption,
Soluble: Water

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.	ORL-RAT LD ₅₀ : N.A.
Chronic effects: N.A.	IHL-RAT LC ₅₀ : N.A.
Target organs: N.A.	SKN-RBT LD ₅₀ : N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 26, 2014

MATERIAL SAFETY DATA SHEET

Product Name: **Wheat Products**

4. FIRST AID MEASURES

EYES: Flush with water for 15 minutes. Consult a physician if irritation persists.

SKIN: Wash with soap and water.

INHALATION: Move to fresh air.

5. FIRE FIGHTING MEASURES

FLASH POINT: N/A

FLAMMABLE LIMITS:

LFL: 55 gm/m³

UFL: Unknown

EXTINGUISHING MEDIA: Foam, CO₂, dry chemical, water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Do not use direct hose stream if dust can be dispersed into air. Dust dispersed by water stream in the presence of an ignition source could cause an explosion.

FIRE AND EXPLOSION HAZARDS: If improperly handled, stored, and/or exposed to an ignition source, this material may burn. Airborne dust in sufficient concentration when confined and exposed to a sufficient ignition source can explode.

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Dust is explosive. Eliminate ignition sources.

Use care to avoid creating dusty conditions. Sweep up and repackage or dispose of in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

GENERAL: May form flammable dust-air mixtures. Use handling practices that minimize dust generation and accumulation.

STORAGE: Store in a dry place.

MATERIAL SAFETY DATA SHEET

Product Name: **Wheat Products**

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general or local ventilation to keep dust levels below the exposure limits.

RESPIRATORY PROTECTION: Provide a NIOSH/MSHA approved respirator if exposure limits are exceeded.

SKIN PROTECTION: Clean body-covering as needed.

EYE PROTECTION: Safety glasses or goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Off-white to tan; flakes
ODOR: Characteristic of wheat
SPECIFIC GRAVITY: No information available
% VOLATILE: N/A
MELTING POINT: N/A
BOILING POINT: N/A
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A

10. STABILITY AND REACTIVITY

GENERAL: Stable

REACTIVITY: None

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:
Dusty conditions exceeding the Lower
Flammable Limit (LFL). Ignition sources.

11. OTHER INFORMATION

Follow procedures specified in the National Fire Protection Association Codes and Standards for handling combustible dusts. Maintain good housekeeping to avoid dust buildup.

Effective Date: May 4, 1993
Revision date: March 25, 2011 changed Emergency Numbers (WB)



Health	1
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Gelatin Powder MSDS

Section 1: Chemical Product and Company Identification

Product Name: Gelatin Powder

Catalog Codes: SLG1798

CAS#: 9000-70-8

RTECS: LX8580000

TSCA: TSCA 8(b) inventory: Gelatin Powder, N.F

CI#: Not available.

Synonym: Gelatine; Gelfoam; Puragel

Chemical Name: Gelatin

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Gelatin Powder, N.F	9000-70-8	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances:

Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards:

Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

Section 7: Handling and Storage

Precautions: Keep away from heat. Keep away from sources of ignition. Do not breathe dust.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Powdered solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not available.

Color: White to Amber.

pH (1% soln/water): Not applicable.

Boiling Point: Decomposition temperature: >100°C (212°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Density: 1.2 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:

Easily soluble in hot water. Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat

Incompatibility with various substances: Not available.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: May react with Tannin, Formaldehyde

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans: Not available.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data. No human data found.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: No adverse effects expected. Eyes: No adverse effects expected, but dust may cause mechanical eye irritation. Inhalation: May cause respiratory tract irritation. Low hazard. No adverse health effects expected from inhalation. Ingestion: Low hazard. No adverse effects expected. Large doses may cause gastrointestinal upset.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Gelatin Powder, N.F

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

OSCL (EEC):

This product is not classified according to the EU regulations. S24/25- Avoid contact with skin and eyes.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 05:36 PM

Last Updated: 05/21/2013 12:00 PM

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Material Safety Data Sheet
Material Name: Elmer's Glue-All Max
MSDS ID: ELM-038
Issue Date: 06/25/10
Revision 1.0000

Other Sections

02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

*** Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ***

Material Name: Elmer's Glue-All Max

Manufacturer Information

Elmer's Products, Inc.

1 Easton Oval

Columbus, OH 43219

Emergency Phone Number:

Poison Control Center

1-888-516-2502 ☎

For additional product information, access our website at www.elmers.com or call 1-888-435-6377 ☎. To place an order, call 1-800-848-9400 ☎.

Trade Names/Synonyms

E9406; E9415; E9416

Product Use

adhesives

*** Section 2 - HAZARDS IDENTIFICATION ***

NFPA Ratings:

Health: 2 Fire: 1 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

EMERGENCY OVERVIEW

Color: brown

Physical Form: liquid

Odor: musty odor

Major Health Hazards: harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, allergic reactions

Physical Hazards: May react on contact with water.

POTENTIAL HEALTH EFFECTS**Inhalation**

Short Term: irritation, allergic reactions, chest pain, difficulty breathing

Long Term: allergic reactions, difficulty breathing

Skin

Short Term: irritation, allergic reactions, skin disorders, itching, rash

Long Term: irritation, allergic reactions, rash, itching

Eye

Short Term: irritation

Long Term: irritation

Ingestion**Short Term:** gastrointestinal irritation**Long Term:** no information on significant adverse effects**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

* * * Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS * * *

CAS	Component	Percent
9016-87-9	POLYMETHYLENE POLYPHENYL ISOCYANATE	30-50
101-68-8	METHYLENE BISPHENYL ISOCYANATE	30-50
Not Available	NON-HAZARDOUS SUBSTANCE	10-30
108-90-7	CHLOROBENZENE	<0.01

* * * Section 4 - FIRST AID MEASURES * * *

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

Skin

If bonding occurs, immerse the bonded surfaces in warm soapy water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention, if needed.

Eyes

If bonding to tissues occurs, wash with large amounts of warm water. Cover both eyes with sterile, dry bandages. The eye will open without further action. Do not pull surfaces apart with a direct opposing action. If burns occur, treat as thermal burns. Get medical attention.

Ingestion

Wet lips with water. Peel or roll the surfaces apart using a blunt edge, such as a spatula or spoon handle. Do not pull surfaces apart with a direct opposing action. If a lump forms in the mouth, turn head to side. If burns occur, treat as thermal burns. Get medical attention.

Note to Physicians

For inhalation, consider oxygen.

Mineral oil, vegetable oil, or petroleum jelly may help soften the bonding between skin surfaces. For skin contact, consider acetone or nitromethane.

* * * Section 5 - FIRE FIGHTING MEASURES * * *

See Section 9 for Flammability Properties

Flammable Properties

Slight fire hazard.

Extinguishing Media

carbon dioxide, regular dry chemical, regular foam, water

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

Hazardous Combustion Products**Combustion:** cyanides, oxides of carbon, oxides of nitrogen

***** Section 6 - ACCIDENTAL RELEASE MEASURES *****

Occupational spill/release

Stop leak if possible without personal risk. **Small spills:** Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

***** Section 7 - HANDLING AND STORAGE *****

Handling Procedures

Use only with adequate ventilation. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin or eyes. Wash thoroughly after handling. Do not get in eyes.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Keep container tightly closed. Store in a well-ventilated area. Avoid contact with water or moisture. Store between 16 C and 38 C. A hazardous build-up of pressure could result due to a reaction with water producing carbon dioxide gas if contaminated containers are resealed. Do not reseal contaminated containers. Reseal uncontaminated containers that are free of moisture only after placing under a nitrogen blanket. Do not store in containers made of copper, copper alloys, or galvanized surfaces. See original container for storage recommendations. Keep separated from incompatible substances.

***** Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION *****

Component Exposure Limits**METHYLENE BISPHENYL ISOCYANATE (101-68-8)**

ACGIH: 0.005 ppm TWA

NIOSH: 0.005 ppm TWA; 0.05 mg/m³ TWA

0.020 ppm Ceiling (10 min); 0.2 mg/m³ Ceiling (10 min)

OSHA: 0.02 ppm Ceiling; 0.2 mg/m³ Ceiling

OSHA (Vacated): 0.02 ppm Ceiling; 0.2 mg/m³ Ceiling

CHLOROBENZENE (108-90-7)

ACGIH: 10 ppm TWA

OSHA: 75 ppm TWA; 350 mg/m³ TWA

OSHA (Vacated): 75 ppm TWA; 350 mg/m³ TWA

Ventilation

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT**Eyes/Face**

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Protective Materials

neoprene, nitrile, butyl rubber

Respiratory Protection

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Respiratory protection is ranked in order from minimum to maximum.

Consider warning properties before use.

Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

*** Section 9 - PHYSICAL AND CHEMICAL PROPERTIES ***

Physical State: Liquid	Appearance: Brown liquid
Color: brown	Physical Form: liquid
Odor: musty odor	Odor Threshold: Not available
pH: Not available	Melting/Freezing Point: Not available
Boiling Point: >300 °C (decomposes)	Flash Point: >110 °C (CC)
Evaporation Rate: Not available	OSHA Flammability Class: IIIB
Vapor Pressure: 0.000004 mmHg	Vapor Density (air = 1): 8.5
Density: Not available	Specific Gravity (water = 1): 1.129
Water Solubility: reacts, immiscible	Coeff. Water/Oil Dist: Not available
Auto Ignition: >600 °C	Viscosity: 2311 cP
Volatility: Not available	

*** Section 10 - STABILITY AND REACTIVITY ***

Chemical Stability

May react on contact with water. Closed containers may rupture.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Materials to Avoid

acids, alcohols, amines, bases, combustible materials, metal salts, metals, oxidizing materials

Hazardous Decomposition

Water or Moisture: oxides of carbon

Hazardous Decomposition

Combustion: cyanides, oxides of carbon, oxides of nitrogen

Possibility of Hazardous Reactions

Polymerization may occur in the presence of metal compounds, alkalies, and tertiary amines at elevated temperatures.

* * * **Section 11 - TOXICOLOGICAL INFORMATION** * * *

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

Inhalation LC50 Rat 490 mg/m³ 4 h; Oral LD50 Rat 49 g/kg; Dermal LD50 Rabbit >9400 mg/kg

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

Oral LD50 Rat 9200 mg/kg

CHLOROBENZENE (108-90-7)

Oral LD50 Rat 1110 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

Inhalation: 490 mg/m³/4 hour Inhalation Rat LC50

Oral: 49 gm/kg Oral Rat LD50

Skin: >9400 mg/kg Skin Rabbit LD50

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

Inhalation: 178 mg/m³ Inhalation Rat LC50

Oral: 9200 mg/kg Oral Rat LD50

Acute Toxicity Level

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

Highly Toxic: inhalation.

Toxic:

Non Toxic: ingestion.

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

Highly Toxic: inhalation.

Toxic:

Slightly Toxic: ingestion.

Toxic:

CHLOROBENZENE (108-90-7)

Moderately Toxic: inhalation, ingestion.

Toxic:

Component Carcinogenicity

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

CHLOROBENZENE (108-90-7)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Irritation

See component data.

RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

100 mg Eyes Rabbit mild

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

100 mg Eyes Rabbit moderate; 500 mg/24 hour Skin Rabbit

Local Effects**POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)**

Irritant: inhalation, skin, eye.

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

Irritant: inhalation, skin, eye.

CHLOROBENZENE (108-90-7)

Irritant: inhalation, skin, eye.

Target Organs**POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)**

immune system (sensitizer).

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

immune system (sensitizer).

CHLOROBENZENE (108-90-7)

central nervous system.

Medical Conditions Aggravated by Exposure

respiratory system (including asthma and other breathing disorders), skin disorders

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

RTECS Reproductive Effects

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Additional Data

May cross react with similar compounds.

* * * Section 12 - ECOLOGICAL INFORMATION * * *

Component Analysis - Aquatic Toxicity**CHLOROBENZENE (108-90-7)**

Fish: 96 Hr LC50 Pimephales promelas: 7-8.5 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 4.5 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 6.9-7.9 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 4.1-4.9

mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 4.1-5.3 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 91 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 36.35-58.19 mg/L [static]

Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 2.55 - 420 mg/L; 96 Hr EC50 Pseudokirchneriella subcapitata: 12.5 mg/L [static]

Invertebrate: 48 Hr EC50 Daphnia magna: 0.59 mg/L

* * * Section 13 - DISPOSAL CONSIDERATIONS * * *

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

CHLOROBENZENE (108-90-7)

RCRA: waste_number U037

100.0 mg/L regulatory level

* * * Section 14 - TRANSPORT INFORMATION * * *

US DOT Information: No Classification assigned.

TDG Information: No Classification assigned.

* * * Section 15 - REGULATORY INFORMATION * * *

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

SARA 313: 1.0 % de minimis concentration

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

SARA 313: 1.0 % de minimis concentration

CERCLA: 5000 lb final RQ; 2270 kg final RQ

CHLOROBENZENE (108-90-7)

SARA 313: 1.0 % de minimis concentration

CERCLA: 100 lb final RQ; 45.4 kg final RQ

TSCA 12b: Section 4, 1 %

SARA 311/312

Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactive:** No

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	No	No	No	Yes	No	No
METHYLENE BISPHENYL ISOCYANATE	101-68-8	Yes	Yes	Yes	Yes	Yes	Yes

CHLOROBENZENE	108-90-7	Yes	Yes	Yes	Yes	Yes	Yes
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Not regulated under California Proposition 65

Canada WHMIS

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

METHYLENE BISPHENYL ISOCYANATE (101-68-8)

0.1 %

U.S. Inventory (TSCA)

All the components of this substance are listed on or are exempt from the inventory.

Component Analysis - Inventory

Component	CAS	US	CA
POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	Yes	DSL
METHYLENE BISPHENYL ISOCYANATE	101-68-8	Yes	DSL
CHLOROBENZENE	108-90-7	Yes	DSL

*** Section 16 - OTHER INFORMATION ***

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

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New MSDS: 6/24/2010

Glycerin

Scholar
Chemistry

MSDS # 314.00

Section 1: Product and Company Identification**Glycerin****Synonyms/General Names:** Glycerol**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.**24 Hour Emergency Information Telephone Numbers****CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification*Clear liquid, no odor.*

Some individuals may be allergic to this substance. Combustible liquid.

Target organs: None known.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

HMS (0 to 4)

Health	0
Fire Hazard	1
Reactivity	0

Section 3: Composition / Information on Ingredients

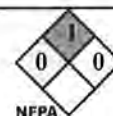
Glycerin (56-81-5), >99.5%

Section 4: First Aid Measures*Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.**Section 5: Fire Fighting Measures**

Combustible liquid. When heated to decomposition, emits acrid fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

**Section 6: Accidental Release Measures**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Contain spill with sand or absorbent material and place in sealed bag or container for disposal. Ventilate and wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage**Green****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.**Section 8: Exposure Controls / Personal Protection**

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Exposure guidelines: Glycerin: OSHA PEL: Not Available, ACGIH: TLV: Not Available, STEL: Not Available.

Section 9: Physical and Chemical Properties

Molecular formula	HOCH ₂ CH(OH)CH ₂ OH.	Appearance	Clear liquid.
Molecular weight	92.10.	Odor	No odor.
Specific Gravity	1.26 g/mL @ 20°C.	Odor Threshold	N/A.
Vapor Density (air=1)	N/A.	Solubility	Soluble in water and alcohol.
Melting Point	18°C.	Evaporation rate	>1 (<i>Butyl acetate = 1</i>).
Boiling Point/Range	290°C.	Partition Coefficient	N/A. (<i>log P_{OW}</i>).
Vapor Pressure (20°C)	0.0025 mm/Hg @ 50°C.	pH	N/A.
Flash Point:	177°C (350.6°F).	LEL	0.9%.
Autoignition Temp.:	393°C (739°F).	UEL	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.

Stability: Stable under normal conditions of use and storage.

Incompatibility: Strong oxidizers.

Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

Ingestion: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. *Inhalation:* Irritation of mucous membranes, coughing, wheezing, shortness of breath,

Chronic Effects: No information found.

Sensitization: some individuals may develop allergies to this material.

Glycerin: LD50 [oral, rat]; 12,600 mg/kg; LC50 [rat]; N/A; LD50 Dermal [rabbit]; 500 mg/24 hr/mild

Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Ecological impact has not been determined.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name: Not regulated by DOT.

Canada TDG: Not regulated by TDG.

DOT Hazard Class:

Hazard Class:

Identification Number:

UN Number:

Section 15: Regulatory Information

EINECS: Listed (200-289-5).

WHMIS Canada: Not WHMIS Controlled.

TSCA: All components are listed or are exempt.

California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009

Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Goo Gone Painter's Pal Gel
Product Code: 1731, 1784
Supplier: THE HOMAX GROUP, INC
Address: 200 WESTERLY ROAD
BELLINGHAM, WA 98226
Telephone: (800) 321-6330 M-F, 9-5 EST
Emergency: CHEMTREC 24 HR (800) 424-9300
Date: June 16, 2011

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>Percent</u>	<u>CAS #</u>
Water	70 - 80	7732-18-5
Tripropylene glycol methyl ether	10 - 20	25498-49-1
Acetone	1 - 10	67-64-1
Benzyl Alcohol	1 - 10	100-51-6

*The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information has been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29CFR 1910.1200).

SECTION 3 – HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye: Causes eye irritation, possibly severe. Contact may produce redness, stinging and pain.

Skin: Causes irritation. A component may be absorbed through the skin with symptoms paralleling ingestion. Prolonged contact can cause redness, pain, drying and cracking of the skin.

Ingestion: May cause irritation of the gastrointestinal tract. May cause abdominal pain, nausea, vomiting, dizziness, headache and central nervous system depression.

Inhalation: Causes irritation to the respiratory tract. May cause coughing, dizziness and headache. Higher concentrations can produce central nervous system depression.

Chronic Exposure: Prolonged and/or repeated skin contact can cause severe irritation or dermatitis.

SECTION 4 - FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention immediately.

Skin: Immediately wash with mild soap and water for 15 minutes, while removing contaminated clothing and shoes. Wash clothing and shoes before reuse. Get medical attention if symptoms persist.

Eye: Immediately flush with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention.

Ingestion: If swallowed, Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point (method): > 200F (PMCC)

LEL: Not Determined

UEL: Not Determined

Autoignition Temperature: Not Determined

Extinguishing Media: Use alcohol foam, carbon dioxide, and dry chemical.

MATERIAL SAFETY DATA SHEET

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Keep containers cool with water spray. Avoid breathing decomposition products. Firefighters should wear NIOSH approved self-contained breathing apparatus and full body protection.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Ventilate area of leak or spill. Clean up remaining materials from spill with suitable absorbent. Small spills may be absorbed with non-reactive absorbent (sand) and placed in suitable containers. For large spills, provide diking or other appropriate containment to keep material from spreading. Prevent large spills from entering sewers or waterways. Observe all personal protection equipment recommendations.

SECTION 7 – HANDLING AND STORAGE

Store in a cool, dry well-ventilated location. Protect against physical damage. Keep container closed when not in use. Keep away from heat, sparks, open flames and other sources of ignition.
Keep Out Of Reach Of Children.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:

Acetone:

OSHA Permissible Exposure Limit (PEL): 1000 ppm (TWA)

ACGIH Threshold Limit Value (TLV): 500 ppm (TWA), 750 ppm (STEL)

Engineering Controls: Provide general or local exhaust ventilation for areas of use.

Respiratory protection: Not normally required. Avoid breathing vapor.

Eye protection: Use chemical goggles or glasses with side shields.

Skin protection: Use chemical resistant gloves.

Other protective clothing or equipment: Eye wash, Safety Shower, Full Protective Clothing.

Work Hygienic Practices: The usual precaution for the handling of chemicals must be observed.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR:	Clear, colorless gel with citrus odor
BOILING POINT:	Not Determined
SOLUBILITY:	Soluble in water
VAPOR PRESSURE (mm Hg):	Not Determined
PH:	6 - 7
EVAPORATION RATE:	Not Determined
Specific gravity:	0.975
VOC:	< 5 %

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.

Conditions to Avoid: Heat, flame, ignition sources and incompatibles.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, formaldehyde, hydrochloric acid and toxic phosgene gas.

Hazardous Polymerization: Will not occur.

Incompatibles: Strong oxidizers, acids, alkalis, chloroform, chlorine compounds and aluminum.

MATERIAL SAFETY DATA SHEET

SECTION 11 - TOXICOLOGICAL INFORMATION

There is no data available for the product. The following are component data:

Acetone (67-64-1): Oral LD50 Rat: 5800 mg/kg
Benzyl Alcohol (100-51-6): Oral LD50 Rat: 1230 mg/kg

<u>Ingredient</u>	<u>-----Cancer Lists-----</u>		
	<u>NTP Known</u>	<u>NTP Anticipated</u>	<u>IARC Category</u>
Tripropylene Glycol Methyl Ether	No	No	None
Acetone	No	No	None
Benzyl Alcohol	No	No	None

SECTION 12 - ECOLOGICAL INFORMATION

No data is available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state and local requirements.

SECTION 14 - TRANSPORT INFORMATION

Not regulated for transport.

SECTION 15 - REGULATORY INFORMATION

Toxic Substances Control Act (TSCA) Inventory: All ingredients are listed or exempted from listing on the inventory.
Canada Domestic Substance List (DSL): All ingredients are listed.

SARA Section 313: Acetone

SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No Reactivity: No

SARA Section 302: None of the ingredients are listed.

CERCLA: Acetone (5000)

California Prop. 65 Warnings: None

WHMIS Classification: D2B

OSHA & WHMIS: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) and Canadian WHMIS regulations (Controlled Products Regulations under the Hazardous Products Act).

SECTION 16 - OTHER INFORMATION

This product is sold to consumers for household use in containers of relatively small volume (i.e. 5 gallon or less in size). This MSDS has been developed to address safety concerns affecting those individuals working in warehouses and other places where large numbers of these containers are stored, as well as those affecting potential users of this product in industrial /occupational settings. All pertinent health, safety and environmental information have been presented in this document, per the requirements of the US Federal OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canadian WHMIS.

Disclaimer: As the handling and use of products under user's conditions are beyond our control, no warranty, expressed or implied, including, but not limited to merchantability or fitness for a particular use, is made concerning this product. The user assumes all risk of use or handling whether or not in accordance with any directions or suggestions of the supplier. Seller shall not be liable to purchaser or any other person for loss or damages directly or indirectly arising from the use of our products, from breach of any warranty or from any other cause, the exclusive remedy against the seller being to require replacement or repair of defective goods.

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: GOO GONE SPRAY GEL
Product Code: GGHS12, GGHS12CN, 5011484
Supplier: MAGIC AMERICAN PRODUCTS
Address: 26901 CANNON ROAD, SUITE 190
BEDFORD HEIGHTS, OH 44146
Telephone: 800-321-6330 M-F, 9-5 EST
Emergency: CHEMTREC 24 HR 800-424-9300
Date: April 30, 2009

SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS

<u>Ingredients</u>	<u>Percent</u>	<u>CAS #</u>
Distillates (petroleum), hydrotreated light	< 95	64742-47-8
Tripropylene glycol methyl ether	1 – 10	25498-49-1
Citrus extracts blend	1 – 10	94266-47-4/8028-48-6

*The ingredients in the balance of this product do not contribute significant hazards beyond those described in this document. All pertinent health, safety and environmental information has been presented, per the requirements of the US Federal OSHA Hazard Communication Standard (29CFR 1910.1200).

SECTION 3 – HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Causes eye irritation.

Skin: Contact may cause irritation. Prolonged or repeated contact may cause drying or cracking.

Ingestion: Symptoms may include headache, nausea, drowsiness, pneumonitis, pulmonary edema, central nervous system depression, convulsions and loss of consciousness. **ASPIRATION HAZARD.** Harmful or fatal if aspirated into lungs.

Inhalation: May cause headache, nausea, drowsiness, central nervous system depression, convulsions and loss of consciousness.

Chronic Effects:

Carcinogenicity: No components listed by IARC, NTP, or OSHA as carcinogens.

SECTION 4 - FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

Skin: Immediately flush with mild soap and water for 15 minutes. Seek medical attention if irritation develops. Remove contaminated clothing and launder before reuse.

Eye: Immediately flush with water for 15 minutes. Seek medical attention.

Ingestion: Do not induce vomiting. Get immediate medical care.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point: 186 F (86 C)

Autoignition Temperature : > 450 F

Extinguishing Media: Foam, carbon dioxide, and dry chemical.

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Keep containers cool with water spray. Avoid breathing decomposition products. Wear self-contained breathing apparatus and full body protection.

Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.

MATERIAL SAFETY DATA SHEET

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Evacuate area and turn off all sources of ignition. Ventilate area. Wear appropriate personal protective equipment, including appropriate respiratory protection. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing. Dispose of collected material in accordance with federal, state and local requirements.

SECTION 7 – HANDLING AND STORAGE

Keep Out Of Reach Of Children. Store in original container. Keep container tightly closed when not in use and in an upright position. Do not store at elevated temperatures and away from incompatible materials.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls: Not normally required. General dilution ventilation.
Respiratory protection: Not normally required. Avoid breathing vapor or spray mists.
Eye protection: use chemical goggles or glasses with side shields.
Skin protection: use chemical resistant gloves.
Other protective clothing or equipment: Eye wash, Safety Shower, Full Protective Clothing.
Work Hygienic Practices: The usual precaution for the handling of chemicals must be observed.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Orange/Yellow gel
Specific Gravity (H₂O = 1):	0.8
Solubility In Water:	negligible
Boiling Point:	> 430 F
Odor:	citrus
VOC:	2% by CARB Definition for Consumer Products

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.
Conditions to Avoid: Sources of ignition.
Incompatible Materials: Avoid contact with oxidizers.
Hazardous Decomposition Products: Thermal decomposition includes oxides of carbon and other asphyxiants.
Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

THIS PRODUCT WAS NOT TESTED. THE FOLLOWING IS COMPONENT DATA:

Distillates (petroleum), hydrotreated light (64742-47-8): Acute Ingestion Toxicity: LD50 > 15000 mg/kg

SECTION 12 – ECOLOGICAL INFORMATION

Product was not tested.

SECTION 13 – DISPOSAL CONSIDERATIONS

Follow federal, provincial or state and local government requirements for disposal.

MATERIAL SAFETY DATA SHEET

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SECTION 14 - TRANSPORT INFORMATION

=====

U.S. DOT (Road or Rail): Not Regulated

Proper Shipping Name:

Hazard Class:

ID Number:

Packing Group:

AIR / WATER / INTERNATIONAL TRANSPORT: Not Determined

Proper Shipping Name:

Hazard Class:

ID Number:

Packing Group:

=====

SECTION 15 - REGULATORY INFORMATION

=====

SARA 302 Chemicals: None of the ingredients are listed.

SARA 313 Chemicals: None of the ingredients are listed.

Toxic Substances Control Act (TSCA): All the ingredients are listed on the inventory

Canadian Domestic Substance List (DSL): All ingredients are listed.

California Prop. 65 Components: None

OSHA & WHMIS: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) and Canadian WHMIS regulations (Controlled Products Regulations under the Hazardous Products Act).

=====

SECTION 16 - OTHER INFORMATION

=====

HMIS RATING: HEALTH: 1 FLAMMABILITY: 2 REACTIVITY: 0

THIS PRODUCT IS SOLD TO CONSUMERS FOR HOUSEHOLD USE IN CONTAINERS OF RELATIVELY SMALL VOLUME (I.E. 5 GALLON OR LESS IN SIZE). THIS MSDS HAS BEEN DEVELOPED TO ADDRESS SAFETY CONCERNS AFFECTING THOSE INDIVIDUALS WORKING IN WAREHOUSES AND OTHER PLACES WHERE LARGE NUMBERS OF THESE CONTAINERS ARE STORED, AS WELL AS THOSE AFFECTING POTENTIAL USERS OF THIS PRODUCT IN INDUSTRIAL /OCCUPATIONAL SETTINGS. ALL PERTINENT HEALTH, SAFETY AND ENVIRONMENTAL INFORMATION HAVE BEEN PRESENTED IN THIS DOCUMENT, PER THE REQUIREMENTS OF THE US FEDERAL OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) AND CANADIAN WHMIS.

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FLINN SCIENTIFIC, INC.

Safety Data Sheet (SDS)

SDS #: 420.50

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Isopropyl Alcohol, 40-90%

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing vapors or spray (P261).

The single lethal dose for a human adult is about 400 mL, although as little as 150 mL can be fatal. Although isopropyl alcohol is slightly toxic by definition, teachers should be alert to students attempting to drink this "alcohol" on a dare.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Isopropyl alcohol	67-63-0	C ₃ H ₈ O	60.10	40-90%
Water	7732-18-5	H ₂ O	18.00	10-60%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). **If skin irritation occurs:** Get medical advice or attention (P332+P313). **If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable liquid.

Flash point: 18 °C for 50-90%, Flash point: 21 °C for 40%.

When heated to decomposition, may emit toxic fumes.

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

None
established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can. Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: (as isopropyl alcohol) PEL 980 mg/m³ (OSHA); TLV 492 mg/m³ Ceiling 984 mg/m³ (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Distinctive odor like rubbing alcohol.
Soluble: Water, alcohol, and ether

Boiling point: 83 °C (70%)
Specific gravity: 0.87 (70%)

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, and isocyanates.
Shelf life: Fair.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Serious eye irritant, mild skin irritant, dizziness, drowsiness, nausea, headache.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system.

ORL-RAT LD₅₀: 5045 mg/kg as isopropyl alcohol
IHL-RAT LC₅₀: 16,000 ppm/8H as isopropyl alcohol
SKN-RBT LD₅₀: 12800 mg/kg as isopropyl alcohol

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A, UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-661-7), RCRA code D001.

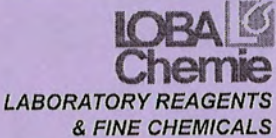
SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

Indicator paper

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2. Hazards identification -DSD (continued)

Not classified.

2.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : UNIVERSAL INDICATOR PAPERS PH 1-10
CAS No :
Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

Inhalation : Assure fresh air breathing. Allow the victim to rest.
Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
Ingestion : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).


5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.
Surrounding fires : Use water spray or fog for cooling exposed containers.

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5. Fire-fighting measures (continued)

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection. Ventilate area.

For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling

Handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

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7. Handling and storage (continued)

Storage : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection** : Wear approved mask.
- **Hand protection** : Wear protective gloves.
- **Eye protection** : Chemical goggles or safety glasses.
- **Others** : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Solid.

Colour : Orange colored paper

Odour : N/A

Odour threshold : No data available.

pH value : Not applicable.

Melting point [°C] : No data available.

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : N/A

Flammability (solid, gas) : N/A

Flash point [°C] : N/A

Boiling point [°C] : N/A

Initial boiling point [°C] : N/A

Final boiling point [°C] : N/A

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9. Physical and chemical properties (continued)

Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm ³]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: N/A
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm ² /s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity : Not established.

10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

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10. Stability and reactivity (continued)

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Based on available data, the classification criteria are not met.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Based on available data, the classification criteria are not met.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information : Not established.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

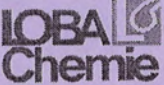
Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

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12. Ecological information (continued)

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

14. Transport information

14.1. Land transport (ADR-RID)

General information : Not regulated.

14.2. Sea transport (IMDG) [English only]

General information : Not regulated.

14.3. Air transport (ICAO-IATA) [English only]

General information : Not regulated.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

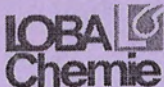
Chemical Safety Assessment : It has not been carried out.

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16. Other information

Revision	: Revision - See : *
Abbreviations and acronyms	: PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative
Sources of key data used	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Further information	: None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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Iron Filings

MSDS # 381.00

Scholar
Chemistry

Section 1: Product and Company Identification

Iron Filings

Synonyms/General Names: N/A

Product Use: For educational use only

Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300

CANUTEC (Canada): 613-424-6666

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Dark black particles; no odor.

This material is not considered hazardous.

Target organs: None known.

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) if used properly.

HMIS (0 to 4)

Health	0
Fire Hazard	0
Reactivity	0

Section 3: Composition / Information on Ingredients

Iron Filings (7439-89-6), 100%

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.

Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.

Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures

Nonflammable solid. When heated to decomposition, emits acrid fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.



Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage

Green

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.

Storage: Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an dust cartridge. Exposure guidelines: Iron: OSHA PEL: Not Available, ACGIH: TLV: Not Available, STEL: Not Available.

Section 9: Physical and Chemical Properties

Molecular formula	Fe.	Appearance	Dark black particles.
Molecular weight	55.85.	Odor	No odor.
Specific Gravity	7.86 g/mL @ 20°C.	Odor Threshold	N/A.
Vapor Density (air=1)	N/A.	Solubility	Soluble in sulfuric or muriatic acid.
Melting Point	1535°C.	Evaporation rate	N/A . (Butyl acetate = 1).
Boiling Point/Range	3000°C.	Partition Coefficient	N/A. (log P_{OW}).
Vapor Pressure (20°C)	N/A.	pH	N/A.
Flash Point:	N/A.	LEL	N/A.
Autoignition Temp.:	N/A.	UEL	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.

Stability: Stable under normal conditions of use and storage.

Incompatibility: Strong oxidizers, organic agents, mineral acids, water.

Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

Ingestion: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. *Inhalation:* Irritation of mucous membranes, coughing, wheezing, shortness of breath,

Chronic Effects: No information found.

Sensitization: none expected

Iron: LD50 [oral, rat]; N/A; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A

Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Not considered an environmental hazard.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for trash disposal.

Section 14: Transport Information

DOT Shipping Name: Not regulated by DOT.

Canada TDG: Not regulated by TDG.

DOT Hazard Class:

Hazard Class:

Identification Number:

UN Number:

Section 15: Regulatory Information

EINECS: Listed (231-096-4).

WHMIS Canada: Not WHMIS Controlled.

TSCA: All components are listed or are exempt.

California Proposition 65: Not listed.

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009

Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.

1: Identification

Product identifier

Product name: Iron granules

Stock number: 39708

CAS Number:

7439-89-6

EC number:

231-096-4

Relevant identified uses of the substance or mixture and uses advised against.

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, Inc.

30 Bond Street

Ward Hill, MA 01835-8099

Tel: 800-343-0660

Fax: 800-322-4757

Email: tech@alfa.com

www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2: Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37: Irritating to eyes and respiratory system.

Information concerning particular hazards for human and environment: Not applicable

Hazards not otherwise classified: No information known.

Elements

Labeling according to Regulation (EC) No 1272/2008 The substance is classified and labeled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word Warning

Hazard statements

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D2B - Toxic material causing other toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	1	Health (acute effects) = 1
FIRE	1	Flammability = 1
REACTIVITY	1	Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3: Composition/information on ingredients

Chemical characterization: Substances

Chemical Description:

7439-89-6 Iron

Product name: Iron granules

(Contd. of page 1)

Identification number(s):
EC number: 231-096-4

first-aid measures

Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek medical treatment.

Information for doctor

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5: Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents Water

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Metal oxide fume

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7: Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires: No information known.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Do not store together with acids.

Store away from oxidizing agents.

Store away from halogens.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Specific end use(s) No further relevant information available.

8: Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

7439-89-6 Iron (100.0%)

EV (Canada)	Long-term value: 1* 5** mg/m ³ as iron; *salts, water-soluble; **welding fume
TLV (Canada)	Long-term value: 5 mg/m ³

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

(Contd. on page 3)

USA



MATERIAL SAFETY DATA SHEET

A

1. Product and Company Identification

Product Name	J-B Weld
Synonym(s)	Resin and Hardener
CAS #	Mixture
Product use	Bonds and repairs
Manufacturer	J-B Weld Company P.O. Box 483 Sulphur Springs, TX 75482 US Phone: 903-885-7696

2. Hazards Identification

Emergency overview	CAUTION MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.
Potential short term health effects	
Routes of exposure	Eye, Skin contact, Ingestion.
Eyes	May cause irritation.
Skin	Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals.
Inhalation	Not a normal route of exposure.
Ingestion	May cause stomach distress, nausea or vomiting.
Target organs	Eyes. Skin.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.
OSHA Regulatory Status	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Potential environmental effects	See section 12.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	68410-23-1	5 - 10
Iron	7439-89-6	5 - 10
Limestone	1317-65-3	10 - 30
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis, homopolymer	25085-99-8	10 - 30
Benzyl alcohol	100-51-6	1 - 5
Formaldehyde, polymer with benzenamine, hydrogenated	135108-88-2	1 - 5
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	1 - 5
Titanium oxide	13463-67-7	0.1 - 1

4. First Aid Measures

First aid procedures	
Eye contact	Flush with cool water. Remove contact lenses, if applicable, and continue flushing. Obtain medical attention if irritation persists.
Skin contact	Flush with cool water. Wash with soap and water. Obtain medical attention if irritation persists.
Inhalation	Not a normal route of exposure.
Ingestion	Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

General advice

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Flammable by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Treat for surrounding material.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of sulphur.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Environmental precautions	Prevent entry into waterways, sewers, basements or confined areas.
Methods for containment	Stop the flow of material, if this is without risk.
Methods for cleaning up	Before attempting clean up, refer to hazard data given above. Dampen material with water and use shovel or scoop to collect material in clean container for proper disposal. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling.
Storage	Keep out of reach of children. Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Benzyl alcohol	ACGIH-TLV Not established OSHA-PEL Not established
Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	ACGIH-TLV Not established OSHA-PEL Not established
Formaldehyde, polymer with benzenamine, hydrogenated	ACGIH-TLV Not established OSHA-PEL Not established
Iron	ACGIH-TLV Not established OSHA-PEL Not established
Limestone	ACGIH-TLV TWA: 5 mg/m3 OSHA-PEL TWA: 15 mg/m3
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] homopolymer	ACGIH-TLV Not established OSHA-PEL Not established
Phenol, polymer with formaldehyde, glycidyl ether	ACGIH-TLV Not established OSHA-PEL Not established
Titanium oxide	ACGIH-TLV TWA: 10 mg/m3 OSHA-PEL TWA: 15 mg/m3

Engineering controls

General ventilation normally adequate.

Personal protective equipment

Eye / face protection

Safety glasses if eye contact is possible.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical Properties

Appearance	Pliable
Color	Grey
Form	Putty

Odor	Not available
Odor threshold	Not available
Physical state	Solid
pH	Not available
Melting point	Not available
Freezing point	Not available
Boiling point	Not available
Pour point	Not available
Evaporation rate	Not available
Flash point	Not available
Auto-ignition temperature	Not available
Flammability limits in air, lower, % by volume	Not applicable
Flammability limits in air, upper, % by volume	Not applicable
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available
Percent volatile	Not available

10. Stability and Reactivity

Reactivity	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers. Caustics.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of sulphur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	LC50
Benzyl alcohol	8.8 mg/l/4h rat
Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	Not available
Formaldehyde, polymer with benzenamine, hydrogenated	Not available
Iron	Not available
Limestone	Not available
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] homopolymer	Not available
Phenol, polymer with formaldehyde, glycidyl ether	Not available
Titanium oxide	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Benzyl alcohol	1230 mg/kg rat
Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	Not available
Formaldehyde, polymer with benzenamine, hydrogenated	Not available
Iron	984 mg/kg rat
Limestone	6450 mg/kg rat
Oxirane, 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] homopolymer	30000 mg/kg rat
Phenol, polymer with formaldehyde, glycidyl ether	Not available
Titanium oxide	24000 mg/kg rat

Effects of acute exposure

Eye	May cause irritation.
Skin	Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals.
Inhalation	Not a normal route of exposure.
Ingestion	May cause stomach distress, nausea or vomiting.
Sensitization	Contains potential skin sensitizers.
Chronic effects	Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity	High concentrations of pigment-grade (powdered) and ultrafine titanium dioxide (titanium oxide) dust have caused respiratory tract cancer in rats exposed by inhalation and intratracheal instillation. Product is a non respirable form.

ACGIH - Threshold Limit Values - Carcinogens

Titanium oxide 13463-67-7 A4 - Not Classifiable as a Human Carcinogen

IARC - Group 2B (Possibly Carcinogenic to Humans)

Titanium oxide 13463-67-7 Monograph 93 [2010]; Monograph 47 [1989]

U.S. - California - Proposition 65 - Carcinogens List

Titanium oxide 13463-67-7 carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)

Mutagenicity Non-hazardous by WHMIS/OSHA criteria.

Reproductive effects Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity Non-hazardous by WHMIS/OSHA criteria.

Name of Toxicologically Synergistic Products Not available

12. Ecological Information

Ecotoxicity See below

Ecotoxicity - Freshwater Algae - Acute Toxicity Data

Benzyl alcohol 100-51-6 3 Hr EC50 Anabaena variabilis: 35 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data

Benzyl alcohol 100-51-6 96 Hr LC50 Pimephales promelas: 460 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 10 mg/L [static]

Iron 7439-89-6 96 Hr LC50 Morone saxatilis: 13.6 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 0.56 mg/L [semi-static]

Ecotoxicity - Water Flea - Acute Toxicity Data

Benzyl alcohol 100-51-6 48 Hr EC50 water flea: 23 mg/L

Persistence / degradability Not available

Bioaccumulation / accumulation Not available

Mobility in environmental media Not available

Environmental effects Not available

Aquatic toxicity Not available

Partition coefficient Not available

Chemical fate information Not available

Other adverse effects Not available

13. Disposal Considerations

Disposal instructions	Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Not regulated as dangerous goods.

Transportation of Dangerous Goods (TDG - Canada)

Not regulated as dangerous goods.

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Benzyl alcohol 100-51-6 1 %

WHMIS status Controlled

WHMIS classification Class D - Division 2A, 2B

WHMIS labeling



Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Iron 7439-89-6 Present

U.S. - California - Proposition 65 - Carcinogens List

Titanium oxide 13463-67-7 carcinogen, initial date 9/2/11 (airborne, unbound particles of respirable size)

U.S. - Illinois - Toxic Air Contaminant Carcinogens

Titanium oxide 13463-67-7 IARC 2B Carcinogen

U.S. - Massachusetts - Right To Know List

Benzyl alcohol 100-51-6 Present

Limestone 1317-65-3 Present

Titanium oxide 13463-67-7 Present

U.S. - Minnesota - Hazardous Substance List

Benzyl alcohol 100-51-6 Present

Limestone 1317-65-3 Present (dust)

Titanium oxide 13463-67-7 Present (dust)

U.S. - New Jersey - Right to Know Hazardous Substance List

Limestone 1317-65-3 sn 4001

Titanium oxide 13463-67-7 sn 1861

U.S. - Pennsylvania - RTK (Right to Know) List

Benzyl alcohol 100-51-6 Present

Limestone 1317-65-3 Present

Titanium oxide 13463-67-7 Present

U.S. - Rhode Island - Hazardous Substance List

Limestone 1317-65-3 Toxic

Titanium oxide 13463-67-7 Toxic

Inventory name

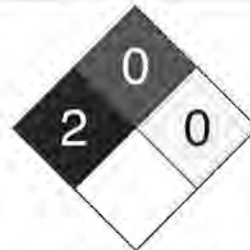
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	2
Flammability	0
Physical Hazard	0
Personal Protection	X



Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Issue date

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Effective date

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Expiry date

01-May-2015

Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021

Other information

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.

Material Safety Data Sheet

Issuing Date 22-Jan-2013

Revision Date 03-Apr-2013

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

EQUATE

Product Name

Equate Dairy Digestive Supplement Chewable Vanilla (Lactaid tablet)

Recommended Use

Nutritional Supplement - Solid.

Supplier Address

Raritan Pharmaceuticals, Inc.
8 Joanna Court, East Brunswick, New
Jersey, 08816
US
Phone:732-432-8200
Fax:732-432-8255
Contact:Sultan Reshamwala
Contact Phone:732-432-8200
Emergency Phone: 917-375-1354

Distributor

Wal-Mart Stores Incorporated
Bentonville, AR USA 72716

Company Emergency Phone Number 917-375-1354

2. HAZARDS IDENTIFICATION

CAUTION!

Emergency Overview

May cause eye irritation

Appearance White

Physical State Solid.

Odor Vanilla

Potential Health Effects

Principle Routes of Exposure

Eye contact. Skin contact.

Acute Toxicity

Eyes

May cause irritation.

Skin

No known effect based on information supplied.

Inhalation

Not an expected route of exposure.

Ingestion

Ingestion above therapeutic dose may cause nausea, vomiting, dizziness, and headache.

Chronic Effects

No known effect based on information supplied.

Aggravated Medical
Conditions

None known.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Supplier Trade Secret	Proprietary	10-30
Supplier Trade Secret	Proprietary	15-40
Supplier Trade Secret	Proprietary	10-20

Supplier Trade Secret	Proprietary	40-70
Supplier Trade Secret	Proprietary	10-20
Supplier Trade Secret	Proprietary	3-8
Supplier Trade Secret	Proprietary	2-9
Supplier Trade Secret	Proprietary	3-9
Supplier Trade Secret	Proprietary	3-8
Supplier Trade Secret	Proprietary	3-9
Supplier Trade Secret	Proprietary	3-9

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable.

Flash Point Not determined.

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazardous Combustion Products Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective Equipment and Precautions for Firefighters
 As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **Health Hazard 1** **Flammability 1** **Stability 0** **Physical and Chemical Hazards -**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with eyes.

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Use personal protective equipment. Take up mechanically and collect in suitable container for disposal.

7. HANDLING AND STORAGE

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Storage Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Supplier Trade Secret	TWA: 10 mg/m ³		

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection No special protective equipment required.
Skin and Body Protection No special protective equipment required.
Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White.	Odor	Vanilla.
Odor Threshold	No information available	Physical State	Solid
pH	No information available		
Flash Point	No information available.	Autoignition Temperature	No information available
Decomposition Temperature	No information available	Boiling Point/Range	No information available
Melting Point/Range	No information available		
Flammability Limits in Air	No information available	Explosion Limits	No information available
Water Solubility	Insoluble in water.	Solubility	No information available
Evaporation Rate	No information available	Vapor Pressure	No data available
Vapor Density	No data available	Partition Coefficient: n-octanol/water	

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products None known.

Conditions to Avoid None known.

Hazardous Decomposition Products Carbon oxides.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information May cause eye irritation.

LD50 Oral VALUE 266666.7 mg/kg (rat) estimated
LD50 Dermal VALUE 79479.4 mg/kg (rat) estimated
LC50 Inhalation (DUST) VALUE
LC50 Inhalation (VAPOR) VALUE

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Supplier Trade Secret		Group 3		

IARC: (International Agency for Research on Cancer)
 Group 3 - Not Classifiable as to Carcinogenicity in Humans

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Supplier Trade Secret	EC50: 18000 - 32000 mg/L (96 h) Chlorella vulgaris	LC50: 18000-32000 mg/L (96 h) Poecilia reticulata		EC50: 5600 - 10000 mg/L (48 h) Daphnia magna

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

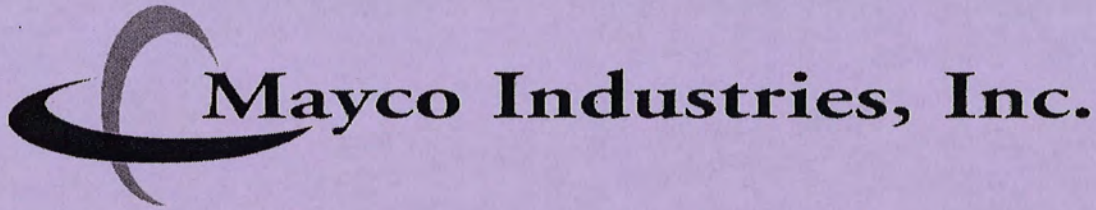
Contaminated Packaging Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG Not regulated

MEX Not regulated



MATERIAL SAFETY DATA SHEET – LEAD SHOT

SECTION 1 - PRODUCT IDENTIFICATION and COMPANY INFORMATION

Product Name: Lead Shot

Synonyms: Reclaimed Lead shot, Reload Lead, Magnum shot,

CAS No: 7439-92-1

Molecular Weight: 207.19

Chemical Formula: Pb

Contact Information:

Mayco Industries, Inc.
18 West Oxmoor Road
Birmingham, AL 35209

Phone: 205-942-4242

Sales: 800-749-6061

Web site: www.maycoindustries.com

SECTION 2 – COMPOSITION and INFORMATION on INGREDIENTS

<u>Material</u>	<u>% by Wt.</u>	<u>CAS #</u>	<u>OSHA EXPOSURE LIMIT</u>
Lead	95 – 99.99	7439-92-1	0.05 mg/cubic meter
Antimony	0.5 – 6.5	7440-36-0	0.50 mg/cubic meter
Arsenic	0.1 – 2.0	7440-38-2	0.01 mg/cubic meter

SECTION 3 – HAZARDS IDENTIFICATION

Potential Health Effects

Inhalation: Lead dust and fume can be absorbed through the respiratory system. Local irritation of bronchia and lungs can occur. In cases of acute exposure, symptoms such as metallic taste, chest and abdominal pain, and increased blood lead levels may follow.

Ingestion: POISON. The symptoms of lead poisoning include abdominal pain and spasms, nausea, vomiting and headache. Acute poisoning can lead to muscle weakness, metallic taste, loss of appetite, insomnia, dizziness, high levels of lead in blood and urine, coma and death in extreme cases.

Skin Contact: Lead may be absorbed through the skin after prolonged exposure. Contact over short periods may cause local irritation.

Eye Contact: May cause eye irritation.

Signs & Symptoms of Overexposure

Acute (short term) exposure: Lead is a potent, systemic poison; taken in large enough doses, lead can kill in a matter of days. Acute encephalopathy may arise which develops quickly to seizures, coma and death from cardio-respiratory arrest.

Chronic (long term) exposure: Chronic overexposure to lead may result in severe damage to blood forming, nervous, urinary and reproductive systems. Some common symptoms of chronic overexposure include loss of appetite, metallic taste in mouth, anxiety, constipation, nausea, pallor, excessive tiredness, weakness, insomnia, headache, nervous irritability, muscle & joint pain, fine tremors, numbness, dizziness, hyperactivity, colic.

SECTION 4 – FIRST AID MEASURES

Emergency & First Aid Procedures

Inhalation: Remove from exposure. Get medical attention if individual experiences any of the acute effects listed above.

Skin: Wash thoroughly with soap and water.

Eyes: Flush with cool running water for at least 15 minutes. Get medical attention if irritation develops.

Ingestion: Get medical attention.

Potential to Cause Cancer

Lead has been proven to cause cancer in animals. Certain lead compounds are suspect human carcinogens.

SECTION 5 - FIRE and EXPLOSION DATA

Flash Point: Not applicable

Extinguishing Media: Dry chemical, foam or CO₂

Special Fire Fighting Procedures: Use positive pressure, self-contained breathing apparatus.

Unusual Fire and Explosion Hazard: None

Lead is not considered to be a fire hazard. Powder/dust is flammable when heated or exposed to flame.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Protective Measures To Be Taken If Material Is Released Or Spilled: Mechanically collect material and place in drums. Use of a vacuum system with a high-efficiency filter is preferable. Process collected material through in-plant reclamation system or send to a lead smelter for reclamation following applicable federal, state and local regulations.

Use protective clothing, gloves and respiratory protection when cleaning up spills.

SECTION 7 – HANDLING and STORAGE

Precautions: Store in a protected area. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust or fume. Wear suitable protective clothing. Keep away from incompatibles such as oxidizing agents.

Other Handling & Storage Precautions

Occupational exposure to elemental lead, inorganic lead compounds and lead soaps (except in the construction industry and agricultural operations) is regulated by the Occupational Safety and Health Administration, Title 29 CFR 1910.1025, "Lead". The aforementioned OSHA regulation should be consulted to assure employees working with lead are properly protected. Exposure to lead in the construction industry is regulated by the Occupational Safety and Health Administration, Title 29 CFR, 1926.62.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Measures

Engineering Controls: Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust or fume, use ventilation to control airborne contaminants.

Work Practices: Avoid generating dust. Do not throw scrap to avoid generation of dust. Store scrap in appropriate containers and keep covered. Do not dry sweep or use compressed air to remove accumulations of lead dust. Vacuuming, using a high-efficiency filtration system is the preferred method for clean-up.

Personal Protection

If the OSHA exposure limit for lead is exceeded and engineering controls are not feasible, a half-face high efficiency respirator may be worn for up to ten times the exposure limit. Other recommended personal protective equipment (PPE) includes protective clothing, including boots and gloves to prevent prolonged skin contact, and safety glasses or goggles.

Other control Measures

Eating, drinking, smoking, and the application of cosmetics should not be permitted in areas where lead products are handled, processed, or stored.

SECTION 9 – PHYSICAL and CHEMICAL PROPERTIES

Material, at normal temperature, is: Solid

Boiling Point, at 760 mm Hg: 1740 C

Specific Gravity: 11.3 (Water = 1)

Vapor Density: Not Applicable

% Volatile by Weight: Not Applicable

Appearance & Odor: Small, solid, gray spheres with silvery cast. No odor

Melting Point: 327° C (620° F)

Vapor Pressure: 1 mm Hg @ 970

Solubility in Water: Slightly soluble in water in the presence of nitrates, ammonium and carbon dioxide

Evaporation Rate: Not applicable

SECTION 10 – STABILITY and REACTIVITY

Stability: Stable

Incompatibility (materials to avoid): Reactive with strong Oxidizers

Hazardous Polymerization: Will not occur

Conditions to Avoid: Avoid contact with incompatible materials

SECTION 11– TOXICOLOGICAL INFORMATION

Investigated as a tumorigen, mutagen and reproductive effector. Lead is a human reproductive hazard. Lead is a probable human carcinogen, proven for animals.

SECTION 12– ECOLOGICAL INFORMATION

Precautions should be taken to prevent the release of lead into the environment. Lead may bioaccumulate to some extent

SECTION 13– DISPOSAL CONSIDERATIONS

Lead scrap can be recycled. Waste materials must be disposed in accordance with federal, state and local environmental requirements.

SECTION 14– TRANSPORT INFORMATION

Lead metal is not a DOT regulated material.

SECTION 15- OTHER REGULATORY INFORMATION

California Proposition 65: Lead in this product is known to the State of California to cause cancer, birth defects, reproductive harm, and other serious injury and would require a warning under the statute.

HMS (U.S.A.)

Health Hazard: 1

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A)

Health Hazard: 1

Flammability: 0

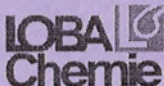
Reactivity: 0

Specific hazard:

SECTION 16- OTHER INFORMATION

Date MSDS Updated: September 1, 2009

Note: The information contained in this MSDS was obtained from sources that are believed to be reliable and represents the best information currently available to us. It is the users' responsibility to determine the suitability of this information for adoption of necessary safety precautions for their particular purposes. Mayco Industries, Inc. does not assume responsibility and expressly disclaims liability for any loss, damage, or expense arising out of, or in any way connected with the handling, storage, use, or disposal of the product identified in this MSDS.

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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : LITMUS BLUE
Product code : 04451
Identification of the product : LITMUS BLUE indicator paper
CAS No :

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai INDIA
Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com
Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

1.4. Emergency telephone number

Phone nr : + 91 22 6663 6663 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Not classified.

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

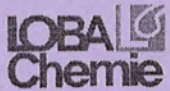
Not classified.

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Not classified.

Labelling Regulation EC 1272/2008 (CLP)

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2. Hazards identification -DSD (continued)

Not classified.

2.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : LITMUS BLUE indicator paper
CAS No :
Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

Inhalation : Assure fresh air breathing. Allow the victim to rest.
Skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
Ingestion : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).


5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.
Surrounding fires : Use water spray or fog for cooling exposed containers.

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5. Fire-fighting measures (continued)

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection. Ventilate area.

For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling


Handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

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7. Handling and storage (continued)

Storage : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection** : Wear approved mask.
- **Hand protection** : Wear protective gloves.
- **Eye protection** : Chemical goggles or safety glasses.
- **Others** : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Solid.

Colour : Blue

Odour : N/A

Odour threshold : No data available.

pH value : Not applicable.

Melting point [°C] : No data available.

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : N/A

Flammability (solid, gas) : N/A

Flash point [°C] : N/A


Boiling point [°C] : N/A

Initial boiling point [°C] : N/A

Final boiling point [°C] : N/A

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9. Physical and chemical properties (continued)

Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm ³]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: N/A
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm ² /s]	: N/A

9.2. Other information

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity : Not established.

10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

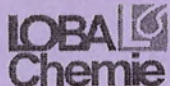
10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

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10. Stability and reactivity (continued)

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Based on available data, the classification criteria are not met.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Based on available data, the classification criteria are not met.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information : Not established.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil

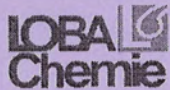
Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

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12. Ecological information (continued)

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

14. Transport information

14.1. Land transport (ADR-RID)

General information : Not regulated.

14.2. Sea transport (IMDG) [English only]

General information : Not regulated.

14.3. Air transport (ICAO-IATA) [English only]

General information : Not regulated.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.


REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

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16. Other information

Revision : Revision - See : *
Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.
vPvB: very persistent and very bioaccumulative
Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Further information : None.


In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : LITMUS RED INDICATOR PAPER
 Product code : 04452
 Identification of the product : LITMUS RED INDICATOR PAPER
 CAS No :

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : LOBA CHEMIE PVT.LTD.
 107 Wode House Road, Jehangir Villa, Colaba
 400005 Mumbai INDIA
 Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com
 Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

1.4. Emergency telephone number

Phone nr : + 91 22 6663 6663 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Not classified.

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)


Not classified.

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Not classified.

Labelling Regulation EC 1272/2008 (CLP)

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2. Hazards identification -DSD (continued)

Not classified.

2.3. Other hazards

Other hazards : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

3. Composition/information on ingredients

Substance / Preparation : LITMUS RED INDICATOR PAPER
CAS No :
Substance.

Contains no other components or impurities which will influence the classification of the product.

4. First aid measures

4.1. Description of first aid measures

- Inhalation** : Assure fresh air breathing. Allow the victim to rest.
- Skin contact** : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- Eye contact** : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- Ingestion** : Obtain emergency medical attention. Rinse mouth. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms relating to use : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

General information : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).


5. Fire-fighting measures

5.1. Extinguishing media

- Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media** : Do not use a heavy water stream.
- Surrounding fires** : Use water spray or fog for cooling exposed containers.

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5. Fire-fighting measures (continued)

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products : Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

Protection against fire : Do not enter fire area without proper protective equipment, including respiratory protection.

Special procedures : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders : Equip cleanup crew with proper protection. Ventilate area.

For non-emergency personnel : Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling


Handling : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.

Technical protective measures : Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

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7. Handling and storage (continued)

Storage : Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

Storage - away from : Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Specific end use(s) : None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

- **Respiratory protection** : Wear approved mask.
- **Hand protection** : Wear protective gloves.
- **Eye protection** : Chemical goggles or safety glasses.
- **Others** : When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits : No data available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Solid.

Colour : Red paper

Odour : N/A

Odour threshold : No data available.

pH value : Not applicable.

Melting point [°C] : No data available.

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : N/A

Flammability (solid, gas) : N/A

Flash point [°C] : N/A

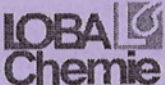
Boiling point [°C] : N/A

Initial boiling point [°C] : N/A

Final boiling point [°C] : N/A

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9. Physical and chemical properties (continued)

Evaporation rate : N/A
Vapour pressure [20°C] : N/A
Vapour pressure mm/Hg : N/A
Vapour density : N/A
Density [g/cm³] : N/A
Relative density, gas (air=1) : N/A
Relative density, liquid (water=1) : N/A
Solubility in water [% weight] : N/A
Solubility in water : N/A
Log Pow octanol / water at 20°C : No data available.
Solubility : N/A
Viscosity at 40°C [mm²/s] : N/A

9.2. Other information

Explosive properties : N/A
Explosion limits - upper [%] : N/A
Explosion limits - lower [%] : N/A
Oxidising properties : No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity : Not established.

10.2. Chemical stability

Chemical stability : Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.


10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

10.6. Hazardous decomposition products

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10. Stability and reactivity (continued)

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Based on available data, the classification criteria are not met.

Corrosion : Based on available data, the classification criteria are not met.

Irritation : Based on available data, the classification criteria are not met.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information : Not established.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

12.4. Mobility in soil


Mobility in soil : Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

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12. Ecological information (continued)

12.6. Other adverse effects

Environmental precautions : Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.

14. Transport information

14.1. Land transport (ADR-RID)

General information : Not regulated.

14.2. Sea transport (IMDG) [English only]

General information : Not regulated.

14.3. Air transport (ICAO-IATA) [English only]

General information : Not regulated.

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.


REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

LOBACHEMIE PVT.LTD.

107 Wode House Road, Jehangir Villa, Colaba 400005 Mumbai INDIA
 Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com
 Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

 LABORATORY REAGENTS & FINE CHEMICALS	SAFETY DATA SHEET SDS/MSDS	Page : 8
		Revised edition no : 0
		Date : 4 / 7 / 2012
		Supersedes : 0 / 0 / 0
LITMUS RED INDICATOR PAPER MSDS CAS: 0000000000		04452

16. Other information

Revision	: Revision - See : *
Abbreviations and acronyms	: PBT: persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative
Sources of key data used	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
Further information	: None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document

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Material Safety Data Sheet (MSDS) for Nonfat Dry Milk



rev. 10/24/08

I. Identification:

Product name: Nonfat Dry Milk

Product Catalog: 9999

Manufacturer Supplier: Cell Signaling Technology
3 Trask Lane
Danvers, MA 01923 USA
1-978-867-2300 TEL
1-978-867-2400 FAX
1-978-578-6737 Emergency TEL

II. Composition/Information on Ingredients:

Substance Name: nonfat-dried milk from bovine
CAS#: none

III. Hazard Identification:

HMIS rating	NFPA Rating
Health: 0	Health: 0
Flammability: 0	Flammability: 0
Reactivity: 0	Reactivity: 0

IV. First Aid Measures:

Inhalation: Remove to fresh air. If breathing is difficult, get medical attention.

Ingestion: If person is conscious wash out mouth with water. Get medical attention.

Skin exposure: Wash skin with soap and water. If irritation develops or persists, get medical attention.

Eye exposure: Immediately flush eyes water for at least 15 minutes lifting upper and lower lids. Get medical attention.

V. Fire Fighting Measures:

Flash Point: Not applicable

Autoignition Temperature: Not applicable

Explosion: Not considered not applicable.

Fire extinguishing media: Water spray, dry chemical, appropriate foam, or carbon dioxide.

Firefighting: Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

Specific Hazard: Emits toxic fumes under fire conditions.

VI. Accidental Release Measures: Use personal proactive equipment as indicated in section VIII. Sweep up, avoid raising dust, and transfer to a suitable waste container for disposal. Wash spill site after material has been picked up.

VII. Handling And Storage:

Handling: Use with adequate ventilation. Avoid contact with eyes and skin, wash thoroughly after handling.

Storage: Store in tightly closed container in cool, dry place.

VIII. Exposure Controls/Personal:

Ventilation System: a system of local and/or general exhaust is recommended.

Skin Protection: wear protective gloves and lab coat to minimize contact with skin.

Eye protection: wear protective eyeglasses or chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

IX. Physical And Chemical Properties:

Appearance:	off-white powder
Odor:	slight
pH	data not available
Boiling Point:	data not available
Melting Point:	data not available
Volatile Organic Compounds (VOC):	data not available
Solubility:	Soluble in water

X. Stability and Reactivity:

Stability: Stable

Conditions to avoid: strong oxidizing agents.

Hazardous Decomposition Products: data not available.

Hazardous polymerization: data not available.

XI. Toxicological Information:

Routes of Exposure

Skin: May cause skin irritation. May be harmful if absorbed through the skin.

Eye: May cause eye irritation.

Inhalation: May be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Signs and symptoms of exposure: To the best of our knowledge the chemical, physical, and toxicological properties have not been thoroughly investigated.

XII. Ecological Information:

No data available.

XIII. Disposal Considerations:

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state and local environmental regulations.

XIV. Transport Information:

D.O.T.

Proper Shipping Name: None

This substance is considered non-hazardous for transport.

IATA

Proper Shipping Name: None

This substance is considered non-hazardous for air transport.

XV. Regulatory Information:

US Regulatory Information:

SARA: Not listed

Canada (WHMIS): Not listed on DSL/NDSL

XVI. Other Information:

This compound is sold only for research use by personnel familiar with chemicals and who are well trained in good laboratory habits, such as avoiding spills, keeping hands clean at all times and not rubbing eyes with hands while working in the laboratory. This product is not intended for drug, household, or other uses.

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide for experienced personnel. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product. The burden of safe use of this material rests entirely with the user.

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SOAP



The Procter & Gamble Company
P&G Household Care
Fabric & Home Care Innovation Center
5299 Spring Grove Avenue
Cincinnati, OH 45217-1087

MATERIAL SAFETY DATA SHEET

MSDS #: RQ1311865/RQ1400299/RQ1400459/RQ1402104/ RQ1309178(AB)
Supersedes: RQ1309635 / RQ1310080 / RQ1310594/ RQ1312426

Issue Date: 07/08/2014
Issue Date: 01/29/2014

SECTION I - PRODUCT IDENTIFICATION

Identity: **Liquid Hand Dishwashing Detergents and Antibacterial Hand Soaps**

Brand: **ULTRA DAWN**

Finished Products Covered:

Ultra Dawn

Original [96663798]

Lemon [96663804]

Pomegranate Awakening [96802729]

Apple Orchard Harvest [96802730]

Antibacterial

Orange Dishwashing Liquid/Antibacterial Hand Soap [99488499]

Apple Blossom Dishwashing Liquid/Antibacterial Hand Soap [96528376]

Dawn Pure Essentials

Sparkling Mist [96663948]

Citrus Infusion [96663944]

Dawn Destinations

Hawaiian Pineapple [96663897]

Thai Dragonfruit [96663896]

New Zealand Springs [96663900]

Mediterranean Lavender [96663942]

Fuji Cherry Blossom [96664182]

Caribbean Breeze [96665015]

Malibu Sunrise [96665021]

P&G Telephone Number: 1-800-725-3296 or call Local Poison Control Center or your physician.

SECTION II - HAZARDS IDENTIFICATION

Potential Health Hazards (Acute and Chronic): (See Section 11 for more information)

Ingestion: Ingestion may cause transient gastrointestinal irritation.

Eye Contact: May cause mild, transient irritation.

Skin: Transient irritation with prolonged exposure to concentrated material.

Inhalation: N/A

Signs and Symptoms of Exposure:

Ingestion: May result in nausea, vomiting, and/or diarrhea.

Eye Contact: May cause stinging, tearing, itching, swelling, and/or redness.

Skin: Prolonged contact with concentrated material may be drying or transiently irritating to skin.

Inhalation: N/A

Potential Environmental Effects: (See Section 12 for more information)

SECTION III - COMPOSITION AND INGREDIENTS

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200. and/or WHMIS under the HPA:

CHEMICAL NAME	COMMON NAME	CAS RN	COMPOSITION RANGE	LD50/LC50
Ethyl alcohol	Ethanol	64-17-5	1 - 5%	LD50(oral, rat) – 7.06 g/kg
Alcohol Ethoxysulfate, sodium salt	Sodium Laureth Sulfate	68585-34-2	10-30% total anionic surfactant	LD50 (oral, rat) - >2g/kg
Alcohol Sulfates, sodium salt	Sodium Lauryl Sulfate	68585-47-7		LD50 (oral, rat) - >2g/kg
Amines, C10-16 alkyldimethyl, N-oxides	Alkyl Dimethyl Amine Oxide	70592-80-2	1 - 5%	LD50 (oral, rat) - 1.33 g/kg

These substances are listed because in their pure bulk form they meet the OSHA and/or WHMIS definition of hazardous. Any hazards associated with this finished product are listed in Section II of this MSDS.

SECTION IV – FIRST AID INFORMATION

First Aid Procedures:

Ingestion: Drink 1 or 2 glasses of water.

Eye Contact: Flush thoroughly with water for 15 minutes.

Skin: If prolonged contact occurs, rinse thoroughly with water. If spilled on clothing, change clothes. If symptoms persist or recur, seek medical attention.

Inhalation: N/A

Other: Consumer product package has the following precautionary statement on the back label: “For external use only. Keep out of the reach of children. If Dawn gets in eyes, rinse thoroughly with water. If swallowed, drink a glass of water to dilute.”

SECTION V - FIRE FIGHTING INFORMATION

Flammable Properties: The liquid hand dishwashing detergents have a flashpoint of 115-135°F (46.1-57.2°C) Pensky-Martens (Closed cup). However, the detergents do **not** sustain combustion according to ASTM D4206.

Flammable Properties:

Upper Flammable Limit: N/A

Lower Flammable Limit: N/A

Explosive Limits: UEL: N/A LEL: N/A

Auto-ignition Temperature: N/A

Hazardous Combustion Products: N/A

Explosion Data (Sensitivity to Mechanical Impact): N/A

Explosion Data (Sensitivity to Static Discharge): N/A

Extinguishing Media:Suitable: CO₂, water or dry chemical may be used.

Unsuitable: N/K

Protection of Firefighters:

Specific Hazards Arising from the Material: None.

SECTION VI - ACCIDENTAL RELEASE MEASURES**Personal Precautions:** None**Environmental Precautions:** DISPOSAL IS TO BE PERFORMED IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. Solutions of the detergents may be allowed to be flushed down sewer - First check with your local water treatment plant. Recycling is recommended for undiluted scrap product. Do not landfill.**Steps To Be Taken in Case Material is Released or Spilled:** Prevent spills from reaching a waterway. Sorbents may be used. Read "Waste Disposal Method" below for further information.**SECTION VII - HANDLING AND STORAGE****Precautions To Be Taken in Handling:** No special precautions necessary.**Precautions To Be Taken in Storage:** No special precautions necessary.**SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION****Recommended Exposure Guidelines:** Ethanol (CAS# 64-17-5) ACGIH-TLV 1000 ppm
OSHA Z-1 PEL 1000 ppm**Engineering Controls:** N/A**Personal Protective Equipment (PPE):** N/A**Eye/Face Protection:** None required with normal household use.**Industrial Setting:** For splash protection, use chemical goggles. Eye wash fountain is recommended.**Skin Protection:** None required with normal household use.**Industrial Setting:** Protective gloves (rubber, neoprene) should be used for prolonged direct contact.**Respiratory Protection:** No special precautions for casual exposure.**Ventilation Local Exhaust:** None required with normal consumer use. *Special:* None**Industrial (General):** Normal/general dilution ventilation is acceptable. *Other:* None**SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES****Appearance (color, physical form, shape):** Clear, opaque or colored liquids.**Flash Point (Method Used):** 115-135°F (46.1-57.2°C)
Pensky-Martens (Closed cup) but do **not** sustain combustion according to ASTM D4206.**Odor:** Perfumed**Reserve Alkalinity:** N/A**Odor Threshold:** N/A**Solubility in Water:** Complete**Physical State:** Liquid hand dishwashing solution**Decomposition Temperature:** N/K**Vapor Pressure (mm Hg):** N/K**Evaporation Rate (nBuOAc=1):** N/K**Vapor Density (Air=1):** N/K**Specific Gravity/Density:** ca. 1**Boiling Point:** N/K**Melting/Freezing Point:** ~ 30 °F (-1.1°C)**Partition Coefficient (n-octanol/water):** N/K**pH (10% solution):** 9**Volatile Organic Compound (VOC):** Not applicable - Product not regulated for VOC Content at State or Federal level

SECTION X - STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: None known
Incompatible Materials: None
Hazardous Decomposition Products: None known
Possibility of Hazardous Reactions: None known

SECTION XI - TOXICOLOGICAL INFORMATION

Liquid hand dishwashing detergents have a relatively low order of toxicity, may cause transient irritation and are expected to be emetic.
Chronic Effects: No chronic health effects reported.
Target Organs: No target organs reported.
Carcinogenicity: This finished product is not carcinogenic. NTP: No IARC: No OSHA: No

SECTION XII - ECOLOGICAL INFORMATION

All surfactants are readily biodegradable.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: DISPOSAL SHOULD BE IN ACCORDANCE WITH FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS

Non Household Setting: Products covered by this MSDS, in their original form, when disposed as waste, are considered **non hazardous waste** according to Federal RCRA regulations (40 CFR 261). Disposal should be in accordance with local, state and federal regulations. Solutions of diluted detergent in the course of use, may be allowed to be flushed down sewer. First check with your local water treatment plant. Recycling is recommended for undiluted scrap product. Do not landfill.

California Hazardous Waste: Not hazardous, in accordance with 22 CCR 66261.20 through 22 CCR 66261.24

Household Use: Household product is safe for disposal down the drain during detergent use or in the trash. Dispose of empty bottle in the trash or recycle where facilities exist.

SECTION XIV - TRANSPORT INFORMATION

Products covered by this MSDS, in their original form, are not regulated for transportation.

Ground Transport (US DOT): Not regulated

Air Transport (IATA): Not regulated

Marine/Water Transport (IMDG): Not regulated

SECTION XV - REGULATORY INFORMATION

United States

All intentionally-added components of this product are listed on the US TSCA Inventory.
 This product is not subject to warning labeling under California Proposition 65.
 EPA Reg. No.: Not Applicable

This product contains the following SARA 313/302/304/311/312 chemicals:

None

This product contains the following CERCLA chemicals:

Chemical Name	CAS Number	Max Range in Product (%)
Ethanol	64-17-5	5.0%

State Right-to-Know:

The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists:

INGREDIENT	CAS RN	MAX LEVEL	STATE				
			IL	MA	NJ	PA	RI
Ethanol	64-17-5	1.0 %	X	X	X	X	X

Perfumes contained within the products covered by this MSDS comply with appropriate IFRA guidance

Canada

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION

Perfumes contained within the products covered by this MSDS comply with appropriate IFRA guidance.

P&G Hazard Rating:	Health: 1	4=EXTREME
	Flammability: 1	3=HIGH
	Reactivity: 0	2=MODERATE
		1=SLIGHT
		0=NOT SIGNIFICANT

*N/A. - Not Applicable

*N/K. - Not Known

Data supplied is for use only in connection with occupational safety and health.

DISCLAIMER: This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.

MATERIAL & SAFETY DATA SHEET

SPIRULINA POWDER

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY:

BOTANICAL NAME: *Spirulina platensis*

PART USED: Algae

SUPPLIER:

The Soap Kitchen, Unit 2 D&E Hatchmoor Industrial Estate,

Torrington, Devon. EX38 7HP

Telephone: 01805 622944 Fax 0870 4586724

E-mail: info@thesoapkitchen.co.uk

IN EMERGENCY:

Notify Police/ambulance and fire brigade immediately.

2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENT:

None known

3. HAZARDS IDENTIFICATION:

Not regarded as a health hazard under current legislation.

4. FIRST AID MEASURES:

GENERAL: Seek medical attention in case of any discomfort.

EYES: In case of sensitivity promptly wash eyes with lots of water while lifting eyelids.

Continue to rinse for at least 15 minutes and seek medical attention.

SKIN: Seek medical attention if irritation persists after washing.

INHALATION: Keep the affected person warm and at rest. Seek prompt medical attention.

INGESTION: NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS. DO NOT INDUCE VOMITING. Seek medical attention.

SYMPTOMS: No specific symptoms noted.

5. FIRE FIGHTING MEASURES:

EXTINGUISHING MEDIA: Water spray, fog or mist, foam, dry chemicals, sand etc.

SPECIAL FIRE FIGHTING PROCEDURES: No special procedures required.

6. ACCIDENTAL RELEASE MEASURES:

SPILL CLEANUP METHODS: Contain spillage and sweep into a suitable container and dispose of as non hazardous waste.

SPIRULINA POWDER

7. HANDLING AND STORAGE:

USAGE PRECAUTIONS: No special instructions or restrictions other than normal good handling practices.

HYGENIC WORK PRACTICES: Eating, smoking and water fountains are prohibited in immediate work area.

Always observe good personal hygiene practices.

STORAGE PRECAUTIONS: Keep in cool, dry, ventilated storage and closed containers. Protect from insect infestation.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

VENTILATION: Provide adequate general and local exhaust ventilation.

RESPIRATORS: General facemask.

GLOVES: Use suitable protective gloves.

EYE PROTECTION: Wear approved safety goggles.

OTHER: Provide eyewash, quick drench.

9. ECOLOGICAL INFORMATION:

Readily biodegradable.

10. TRANSPORT INFORMATION:

	ROAD:	AIR:	SEA:	RAIL:
UN.NO.	N/A	N/A	N/A	N/A
HAZCHEM CODE:	N/A	N/A	N/A	N/A
CLASS NO.	N/A	N/A	N/A	N/A

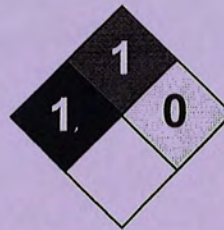
LABEL FOR SUPPLY:

No hazard label required. These products are not classified as dangerous under the Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.

DISCLAIMER:

This information may not be valid for these materials used in combination with any other material or in any process. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date shown. However, no guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their own particular use.

30th April 2008



Health	1
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet Starch, Corn MSDS

Section 1: Chemical Product and Company Identification

Product Name: Starch, Corn

Catalog Codes: SLS2026

CAS#: 9005-25-8

RTECS: GM5090000

TSCA: TSCA 8(b) inventory: Starch

CI#: Not available.

Synonym: Corn Starch

Chemical Name: Starch

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Starch	9005-25-8	100

Toxicological Data on Ingredients: Not applicable.

Section 3: Hazards Identification

Potential Acute Health Effects: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. **MUTAGENIC EFFECTS:** Not available.

TERATOGENIC EFFECTS: Not available. **DEVELOPMENTAL TOXICITY:** Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact: Not available.

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: Not available.

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

TWA: 10 (mg/m³) from ACGIH (TLV) [United States] [1999] Inhalation Total. TWA: 10 (mg/m³) [Canada] Inhalation Total. TWA: 10 (mg/m³) from NIOSH Inhalation Total. TWA: 5 (mg/m³) from NIOSH Inhalation Respirable. TWA: 15 (mg/m³) from OSHA (PEL) [United States] Inhalation Total. TWA: 5 (mg/m³) from OSHA (PEL) [United States] Inhalation Respirable. Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not available.

Color: White.

pH (1% soln/water): Not applicable.

Boiling Point: Not available.

Melting Point: Decomposes.

Critical Temperature: Not available.

Specific Gravity: 1.5 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not available.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:

LD50: Not available. LC50: Not available.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH.

Other Toxic Effects on Humans: Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: May cause mild skin irritation. Low hazard for usual industrial handling. Eyes: Dust may cause mechanical irritation. Inhalation: Excessive inhalation may cause minor respiratory irritation. Ingestion: A low hazard for usual industrial handling Chronic Potential Health Effects: no information.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: Not available.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:

Rhode Island RTK hazardous substances: Starch Pennsylvania RTK: Starch Minnesota: Starch Massachusetts RTK: Starch Tennessee: Starch TSCA 8(b) inventory: Starch

Other Regulations: EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):

This product is not classified according to the EU regulations. S24/25- Avoid contact with skin and eyes.

HMIS (U.S.A.):

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/09/2005 06:39 PM

Last Updated: 06/09/2012 12:00 PM

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Material Safety Data Sheet

Sudan III

ACC# 60590

Section 1 - Chemical Product and Company Identification

MSDS Name: Sudan III

Product Grade :

Catalog Numbers: 40002

Synonyms: Sudan III Staining Powder

Company Identification:

Fisher Scientific

Part of Thermo Fisher Scientific

THERMO ELECTRON LLS INDIA PVT.LTD.

Godrej Coliseum, 101A-101B, Somaiya Hospital Road,

Off Eastern Express Highway, Sion (East), Mumbai-400 022, India

For information, call: 022 – 6680 3001/2, **Call India Toll Free –** 1800 209 7001

Emergency Number: 022-66803004/14

For CHEMTREC assistance, call: 800-424-9300 [International]

For International CHEMTREC assistance, call: 703-527-3887 [International]

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
85-86-9	Sudan G	>99	201-638-4

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

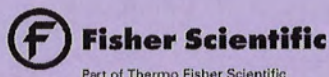
Appearance: dark red to brown solid.

Caution! May cause eye irritation. The toxicological properties of this material have not been fully investigated.

Target Organs: None known.

Potential Health Effects

Eye: Dust may cause mechanical irritation.



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Skin: No information regarding skin irritation and other potential effects was found.

Ingestion: The toxicological properties of this substance have not been fully investigated.

Inhalation: The toxicological properties of this substance have not been fully investigated. Inhalation of dust may cause respiratory tract irritation.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. Combustion generates toxic fumes.

Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

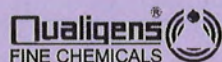
Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.



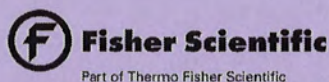
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Spills/Leaks: Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sudan G	none listed	none listed	none listed

OSHA Vacated PELs: Sudan G: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

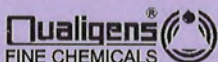
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: dark red to brown

Odor: none reported



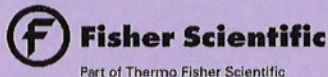
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pH: Not available.
Vapor Pressure: Negligible.
Vapor Density: Not available.
Evaporation Rate: Negligible.
Viscosity: Not available.
Boiling Point: Not available.
Freezing/Melting Point: 199 deg C
Decomposition Temperature: 198.9 deg C
Solubility: Insoluble in water.
Specific Gravity/Density: Not available.
Molecular Formula: C₂₂H₁₆N₄O
Molecular Weight: 352.1382

Section 10 - Stability and Reactivity

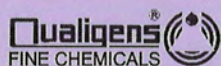
Chemical Stability: Materials containing similar functional groups can decompose at elevated temperatures.
Conditions to Avoid: High temperatures, incompatible materials, dust generation.
Incompatibilities with Other Materials: Strong oxidizers.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 85-86-9: QK4250000
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 85-86-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.
Other Studies:



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Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information reported.

Physical: No information available.

Other: None.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Please contact Fisher Scientific for shipping information	No information available.
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

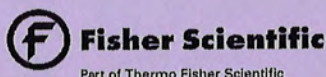
US FEDERAL

TSCA

CAS# 85-86-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.



Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 85-86-9: reactive.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 85-86-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 85-86-9: No information available.

Canada - DSL/NDSL

CAS# 85-86-9 is listed on Canada's DSL List.

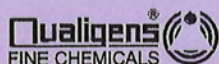
Canada - WHMIS

This product has a WHMIS classification of Not controlled..

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 85-86-9 is listed on the Canadian Ingredient Disclosure List.



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Section 16 - Additional Information

MSDS Creation Date: 5/11/1998

Revision #6 Date: 2/18/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Super Glue (Gel)



**MATERIAL SAFETY
DATA SHEET**

9420 Santa Anita Avenue
Rancho Cucamonga, CA 91730
(909) 987-0550 • Corp. Office: (800) 538-3091
Fax: (909) 987-0490 • www.pacertechnology.com

Page 1 of 3

FOR CHEMICAL EMERGENCY ONLY:

US & CANADA: (800) 424-9300 **Int'l & Wash. DC:** (703) 527-3887

1. PRODUCT IDENTIFICATION:

Product ID	Super Glue Gel – SGG2, SGG23, SGGM22, SGG22, SGGM2, 12301, 12304, 15176, 15185
-------------------	--

2. COMPOSITION/INGREDIENTS:

CHEMICAL NAME	CAS #	OSHA PEL	ACGIH TLV	Other Limits	Wt. %
Ethyl cyanoacrylate	7085-85-0	NE	0.2 ppm TWA	NE	85-100

3. HAZARDS IDENTIFICATION:

Emergency Overview

	HMIS	NFPA	
Health	2	2	Clear, colorless thick liquid with irritating odor. CAUTION: BONDS SKIN & EYES IN SECONDS. Irritating to eyes, respiratory system and skin. Avoid contact with clothing as can cause burn. Keep out of reach of children.
Flammability	2	2	
Reactivity	1	1	
Physical Hazard			

Toxicity	May cause allergic skin reaction with prolonged contact. Possible skin sensitizer.			
Primary routes of entry	Inhalation	Skin	Eyes	Ingestion
	Yes	No	Yes	---
Signs/Symptoms of Exposure	Inhalation	Coughing, wheezing, allergic-type reaction		
	Skin	Possible redness, irritation; possible dermatitis with prolonged or repeated contact.		
	Eyes	Weeping, redness, irritation		
	Ingestion	Adhesive becomes solid in contact with saliva and may adhere to inside of mouth.		

4. FIRST AID MEASURES:

Inhalation	Remove to fresh air. Prolonged or repeated elevated exposure may cause allergic reactions with asthma-like symptoms in sensitive individuals.
Skin	Wash with soap & water. Peel or roll skin apart to separate. Adhesive wears off of skin with water exposure.
Eyes	Immediately flush eyes with plenty of water for 15 minutes. Get immediate medical attention. Water flushing aids in sloughing off adhesive over time.
Ingestion	Peel or roll skin apart. Adhesive becomes solid in contact with saliva & may adhere to inside of mouth. Saliva will lift adhesive in 1-2 days. Additional water exposure helps to speed up removal. Avoid swallowing solid adhesive after detachment. Not a toxic product.

5. FIRE FIGHTING MEASURES: FLASH POINT: 186 °F/ 86°C

LEL: NE

UEL: NE

Extinguishing Media	Use dry chemical extinguisher or flush with large amounts of water.
Special Fire Fighting Procedures	As in any chemical fire, wear self-contained breathing apparatus, pressure-demand (NIOSH approved or equivalent) and full protective gear.
Hazardous Products of Combustion	Combustible by-products of carbon monoxide and carbon dioxide.
Unusual Fire/Explosion Hazards	Adhesive becomes solid in contact with water.

**MATERIAL SAFETY
 DATA SHEET**

Product ID	Super Glue Gel – SGG2, SGG23, SGM22, SGG22, SGM2, 12301, 12304, 15176, 15185
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6. ACCIDENTAL RELEASE MEASURES:

Spill Procedures	Polymerize with water. Increase ventilation to area. Solid material may be scraped from surface.
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7. HANDLING AND STORAGE:

Handling	Use in well-ventilated area. Avoid contact with eyes, skin and clothing. Avoid breathing (dust, vapor, mist). Avoid contact with skin, eye and clothing. Keep container closed when not in use. Protect work surfaces with metal foil.
Storage	Store in a cool place in original container and protect from sunlight. Keep away from sources of ignition. Ideal storage: 41-50F. Do not store with food products.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

EYES	SKIN	VENTILATION	OTHER
With possible eye/face contact, wear safety glasses.	Wear suitable protective clothing and gloves (neoprene).	Use in well-ventilated area or wear NIOSH full face respirator with carbon cartridges.	Facilities storing or utilizing this material should have an eyewash facility and a safety shower.

9. PHYSICAL & CHEMICAL PROPERTIES:

Appearance: Clear, transparent, thick colorless liquid	Odor: Irritating odor	Boiling Point: 365 F / 185 C
Specific Gravity (H₂O=1): 1.10	Solubility in Water: Insoluble, material becomes solid.	Melting Point: NE
Vapor Density (Air=1): NE	Vapor Pressure (mm Hg): 1 @ 20C	Evaporation Rate (Butyl acetate=1): NE
Volatile Organic Compounds-VOC (less exempt): <2% (< 20 g/L) – (per SCAQMD Method 316B – estimated)		

10. STABILITY & REACTIVITY:

Stable: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Hazardous Polymerization: <input type="checkbox"/> may occur <input checked="" type="checkbox"/> may not occur
Incompatible materials:	Polymerized by water, alcohol, amines, alkaline materials and direct UV light.
Conditions to avoid:	Avoid temperatures above 176 F / 80 C, moisture and alkalines.
Hazardous decomposition products:	Carbon monoxide/dioxide and other toxic or irritating compounds. Oxides of nitrogen and probably hydrogen cyanide are also possible during combustion.

11. TOXICOLOGICAL INFORMATION:

Oral LD50 = >5000 mg/kg (rat)(estimated). Dermal LD50 = >2000 mg/kg (rabbit)(estimated).
 Inhalation LC50 notes: Recommended TWA 0.2 ppm. Vapors may be irritating.

Hazardous components	Health effects/Target organs
Ethyl cyanoacrylate	Irritant, allergen, respiratory

12. ECOLOGICAL INFORMATION:

No known hazards.

13. DISPOSAL CONSIDERATIONS:

Polymerize with water to a solid material. Dispose of as solid waste or trash in accordance with local government regulations of the region.

**MATERIAL SAFETY
 DATA SHEET**

Product ID	Super Glue Gel – SGG2, SGG23, SGGM22, SGG22, SGGM2, 12301, 12304, 15176, 15185
-------------------	--

14. SHIPPING:

DOT	Not regulated
IMDG	Not regulated
IATA	Not regulated (less than 500 mL) UN3334, AVIATION REGULATED LIQUID, N.O.S. (ethyl cyanoacrylate), 9

15. REGULATORY INFORMATION:

TSCA Status: All ingredients in this product are listed, or are exempt, for the TSCA Inventory list.
California Proposition 65: No California Proposition 65 chemicals are known to be present, or are intentionally added in the manufacture of this product.
Other: None known.

16. OTHER INFORMATION:

Abbreviations used in this document:

- NA** = not applicable
- NE** = not established

Preparation date: 04/07/14
Revision number: 17
Prepared by: Mary Robles, Regulatory Affairs Manager

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MSDS

MATERIAL SAFETY DATA SHEET

PRODUCT TRADE NAME:

HOMAX PRODUCTS, INC.
STEEL WOOL

Distributed by:
www.SteelWool.biz
800-274-9299

SECTION I - MANUFACTURER IDENTIFICATION

MANUFACTURER'S NAME:
RHODES AMERICAN
1540 E. DUNDEE RD SUITE 210
PALATINE, IL 60623

24 HOUR EMERGENCY PHONE NUMBER:
CHEMTREC 1-800-424-9300
INFORMATION PHONE NUMBER: 1-800-729-9029
DATE OF PREPARATION: 06/30/03

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

NON HAZARDOUS INGREDIENTS CAS #	STEEL NIOSH (RTECS)	100%		
7439-89-6	N06925000		Fe - 98%	Si - .35%
7440-44-0	FF580000		C - .7%-.14%	
7439-96-5	009275000		Mn - .95%MAX.	
			P - .08% MAX.	
			S - .05% MAX.	

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

APPEARANCE AND ODOR:	GRAY FINE STEEL WOOL FIBER, NO ODOR
BOILING POINT:	2750 DEGREES C
VAPOR PRESSURE (MMHG/70F)	N/A
MELTING POINT:	1535 DEGREES C
VAPOR DENSITY (AIR =1)	N/A
SPECIFIC GRAVITY (WATER=1)	7.8
EVAPORATION RATE	N/A
SOLUBILITY IN WATER	NOT SOLUBLE

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED):	250 DEGREES C
LEL: N/A	UEL: N/A
	N/A
EXTINGUISHING MEDIA:	WATER/CARBON DIOXIDE
SPECIAL FIRE FIGHTING	WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT

PROCEDURES:
UNUSUAL FIRE AND EXPLOSION AVOID CONTACT WITH INCOMPATIBLE MATERIAL.
HAZARDS:

Distributed by:
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800-274-9299

SECTION V – REACTIVITY DATA

STABILITY:

MATERIAL IS STABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

AVOID CONTACT WITH OPEN FLAMES & ELECTRICITY.

HAZARDOUS DECOMPOSITION PRODUCTS:

HYDROGEN IS FORMED WHEN IN CONTACT WITH MINERAL ACIDS.

HAZARDOUS POLYMERIZATION:

NO

CONDITIONS TO AVOID: (POLY)

NOT RELEVANT

SECTION VI – HEALTH HAZARD DATA

LD50-LC50 MIXTURE: NOT GIVEN FOR PRODUCT AS A WHOLE

ROUTE OF ENTRY: INHALATION: YES SKIN: NO INGESTION: YES

HEALTH HAZARDS ACUTE & CHRONIC: NONE APPLICABLE

CARCINOGENICITY: NTP: NO IARC: NO OSHA: NO

EXPLANATION OF CARCINOGENICITY: CONTAINS NO INGREDIENTS THAT ARE CARCINOGENS OR SUSPECTED CARCINOGENS

SIGNS/SYMPTOMS OF EXPOSURE: EYE IRRITATION

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: UPPER RESPIRATORY DISEASE.

EMERGENCY/FIRST AID PROCEDURES: IRRIGATE EYES-CALL PHYSICIAN IMMEDIATELY

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN INCASE MATERIAL IS RELEASED OR SPILLED:

SWEEP UP MATERIAL FOR DISPOSAL. GLOVE RECOMMENDED.

WASTE DISPOSAL METHOD:

GENERAL BULD DISPOSAL METHOD.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

USE PROTECTIVE GLOVES. STORE AWAY FROM OXIDIZING AGENTS & MINERAL ACIDS.

NEUTRALIZING AGENTS:

NONE

OTHER PRECAUTIONS:

NONE

SECTION VIII – CONTROL MEASURES

RESPIRATORY PROTECTION: NIOSH APPROVED DUST MASK.

VENTILATION: LOCAL EXHAUST

PROTECTIVE GLOVES: WORK GLOVES RESISTANT TO ABRASION.

EYE PROTECTION: GOGGLES RECOMMENDED

OTHER PROTECTIVE CLOTHING & EQUIPMENT: NONE

WORK HYGENIC PRACTICES: WASH WITH SOAP AND WATER AFTER HANDLING PRODUCT AND BEFORE EATING & DRINKING

SUPPLIER SAFETY & HEALTH DATA: NONE

SECTION VIII- TRANSPORTATION DATA

DOT PSN CODE: NONE
IMO PSN CODE: NONE
IATA PSN CODE: NONE
AFI PSN CODE: NONE

DOT PROPER SHIPPING NAME: NOT REGULATED
IMO PROPER SHIPPING NAME: NOT REGULATED
IATA PROPER SHIPPING NAME: NOT REGULATED
AFI PROPER SHIPPING NAME: NOT REGULATED

DISPOSAL DATA: NONE
LABEL DATA: LABEL REQUIRED: YES
MFR LABEL: NONE LABEL STATUS: F
COMMON NAME: STEEL WOOL FIBERS SIGNAL WORD: CAUTION!
CHRONIC HAZARD: NO
ACUTE HEALTH HAZARD: NONE
CONTACT HAZARD: NONE
FIRE HAZARD: SLIGHT
REACTIVITY HAZARD: SLIGHT

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www.SteelWool.biz
800-274-9299

Material Safety Data Sheet

SUCRALOSE

Section 1: Chemical Product and Company Identification

Product Name: Sucralose

Customs Tariff No: 29400000

Synonym Name:

Sucralose; 4,1',6' -trichloro-galacto-sucrose

Chemical Formula: C₁₂H₁₉CL₃O₈

Company Information:

Chemtrade International

Rm. 201, Unit 3, Building 8, Shijia Garden, No. 93,

Xiangjiang Road, Qingdao Development Zone,

Qingdao, Shandong, China 266555

Tel: 0086-532-86893005

Fax: 0086-532-86893005

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS No.	EINECS No.	%by weight
Sucralose	56038-13-2	259-952-2	100

Section 3: Hazards Identification

EMERGENCYOVERVIEW

Potential Health Effects: No adverse effects expected.

Primary Route(s) of Entry: Inhalation/Ingestion.

Eyes: No adverse effects expected.

Skin: Sustained exposure in a dusty manufacturing environment may result in irritation in the creases of the skin, particularly at the fingers and hands.

Ingestion: Material is an intensely sweet, non toxic crystalline powder. No adverse effects expected.

Inhalation: Exposure to high airborne concentration may cause mild respiratory irritation.

Section 4: First Aid Measures

No treatment necessary under ordinary circumstances. Use good personal hygiene- wash thoroughly with soap and water after handling.

If any redness or irritation develops, contact a physician.

Eyes: No special treatment under normal circumstances - flush with water

Skin: No special treatment under normal circumstances - flush with water

Ingestion: No special treatment under normal circumstances- drink copious amounts of water or milk

Inhalation: No special treatment under normal circumstances- move to fresh air

Note to Physician:

Sucralose is safe for human consumption based on extensive toxicological studies. Material is an intensely sweet, crystalline powder. Exposure to high airborne concentration may cause mild respiratory or eye irritation.

Section 5: Fire and Explosion Data

Fire fighting Measures - Stable under normal conditions. Dust Hazard Classification (NFPA-68) is St-2, the formation of flammable/explosive air/dust mixtures is possible. Appropriate measures should be employed to minimize the potential for dust concentrations in the flammable range. It is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions.

Flammable Properties: Stable under normal conditions. Sucralose, when heated at elevated temperatures, may break down with the release of carbon dioxide, carbon monoxide and minor amounts of hydrogen chloride. Heavy concentrations of sucralose dust may create conditions contributing to dust explosions.

Fire and Explosion Hazards: Minimum spark ignition energy: 0.40 Joules Minimum ignition temperature: 390°C (734 OF) Minimum explosion concentration for dust: 16.5 g/M (0.165 oz/Ft) (similar to a dense fog).

Extinguishing Media: Use any media which is suitable for the surrounding fire: water, dry chemical, foam, CO₂, etc.

Fire fighting Instructions: Wear self-contained breathing apparatus and full protective gear evacuate personnel to a safe area.

Section 6: Accidental Release Measures

No special clean-up procedure is necessary. Avoid creating conditions that will contribute to high concentrations of sucralose dust. Carefully dampen and sweep or vacuum up into appropriate sealed waste container for disposal.

Section 7: Handling and Storage

Handling Precautions: Avoid creating dusty conditions. While no special respiratory protection is required, a dust mask, gloves and other good industrial hygiene practices to minimize worker exposure will result in a more comfortable work environment.

Storage Precautions: Store tight covered container in a cool dry area preferably in Doucette's supplied drum packaging.

Section 8: Exposure Controls/Personal Protection

Engineering Controls It is recommended that all dust control equipment and material transport systems involved are engineered to prevent conditions contributing to dust explosions.

Eye/Face Protection Eye protection consistent with good laboratory practices or good industrial hygiene practices for handling powders is highly recommended.

Skin Protection Use good industrial hygienic practices.

Respiratory & Other While no special respiratory protection is required, a dust mask, gloves

Protection (rubber or plastic) and other good industrial hygiene practices to minimize worker exposure will usually result in a more comfortable work environment

Other/General

Protection Wear a hair cap.

Section 9: Physical and Chemical Properties

Appearance White to off-white, fine powder

Odor Practically odorless

Odor Threshold N/A

Basic Physical Properties

Boiling Point: N/A

Melting Point: 130° C (266°F) with decomposition

Vapor Pressure: <1 mmHg

Solubility (H₂O): complete 30% w/v at 25°C (77°F)

PH: Neutral in aqueous solution.

Section 10: Stability and Reactivity Data

Stability: Stable under normal conditions (temperature, pressure and humidity. Sucralose, when heated at elevated temperatures, may break down with the release of carbon dioxide, carbon monoxide and minor amounts of hydrogen chloride.

Conditions to Avoid: Prolonged storage at elevated temperatures (>38°C, or> 100°F) or high humidity.

Incompatible Materials: Powerful reducing or oxidizing agents, strong alkalis.

Hazardous Decomposition:

Carbon dioxide, carbon monoxide and minor amounts of hydrogen chloride.

Polymerization: None known

Hazardous Polymerization: None reported

Section 11: Toxicological Information

Acute Studies: Material is a non-toxic food additive conforming to Food Chemical Codex and USPINF. Oral rat LD~ >10 g/kg; Oral mouse LD~ >16 g/kg - no mortalities reported even at the highest tested doses.

Section 12: Ecological Information

Sucralose is biodegradable and poses no risk to the environment. Sucralose and its breakdown products are non-toxic to plant, aquatic and animal life, are not fat-soluble, and do not accumulate in plant or animal tissue.

Section 13: Disposal Considerations

No special disposal considerations.
Dispose in accordance with federal, state and local regulations.

Section 14: Transport Information

Transport Information No special considerations or problems.

Proper Shipping Name & Information:

Hazard Class: Subsidiary Hazard Class: DOT Identification Number: DOT Shipping Label: Non-hazardous Packaging Exemptions: Packaging Requirements: Freight Classification: Standard

Section 15: Other Regulatory Information

US Federal Regulatory Information OSHA: No components are listed as hazardous materials and/or are present in quantities as defined in OSHA 29CFR 1910.1200

Not on the Health and Safety Reporting List or are under a chemical test rule. Not listed under TSCA section 12b or have a SNUR

SARA Nothing in this material has an RQ or TPQ, nothing is reportable under section 313.

Clean Air Act: Does not contain any hazardous air pollutants or Ozone depleters.


Clean Water Act: Nothing in this product is listed as hazardous or a pollutant under CWA.

Section 16: Other Information

MSDS Creation Date: 6/16/2000

Revision #4 Date: 3/15/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Chemtrade International be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Chemtrade International has been advised of the possibility of such damages.

 IOBA Chemie LABORATORY REAGENTS & FINE CHEMICALS	SAFETY DATA SHEET SDS/MSDS	Page : 1
		Revised edition no : 0
		Date : 7 / 8 / 2012
		Supersedes : 0 / 0 / 0
UNIVERSAL INDICATOR PAPER (pH Paper) MSDS CAS: 0000000000		06433

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : UNIVERSAL INDICATOR PAPER
 Product code : 06433
 Identification of the product : UNIVERSAL INDICATOR PAPERS PH 1-10
 CAS No :

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification : LOBA CHEMIE PVT.LTD.
 107 Wode House Road, Jehangir Villa, Colaba
 400005 Mumbai INDIA
 Contact: +91 22 6663 6663 / Fax +91 22 6663 6699 / info@lobachemie.com
 Safety Officer: + 91 98213 31336 / + 91 98214 86040 / safety@lobachemie.com

1.4. Emergency telephone number

Phone nr : + 91 22 6663 6663 (9:00am - 6:00 pm) [Office hours]

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Not classified.

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Not classified.

2.2. Label elements

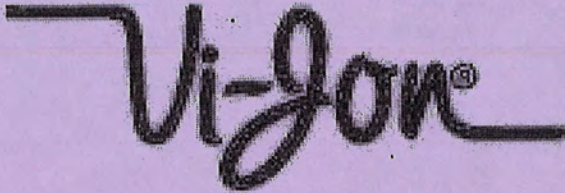
Labelling EC 67/548 or EC 1999/45

Not classified.

Labelling Regulation EC 1272/2008 (CLP)

Walmart "equate"

Material Safety Data Sheet

The logo for Vi-Jon is written in a large, stylized, cursive font. The letters are thick and black, with a registered trademark symbol (®) at the end of the word.

"Talcum powder"

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Vi-Jon Incorporated
8515 Page Avenue
Saint Louis, MO 63114

Phone: 314-427-1000
In Case of Spill Emergency Contact:
Chemtrec: 1-800-424-9300

Product Name: Baby Powder
Product Code: 807
Product Use: Baby Powder
Issue Date: 03/19/08
Supersedes Date: None

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Keep out of reach of children. Targets CVS, eyes, respiratory system (containing no asbestos and less than 1% quartz)
Appearance/Odor: A very fine gray to white powder with a baby perfume odor.

Symptoms of Exposure:

Inhalation: May cause irritation of the lower respiratory tract.
Ingestion: May cause nausea, vomiting and diarrhea.
Eyes: May cause irritation to the eyes.
Skin: None expected.

IARC – Group 3 (Not Classifiable)

This material does not contain any components that are considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

There are no components that are considered an OSHA health hazard.

Section 4: FIRST AID MEASURES

Emergency first aid procedures by route of exposure:

- Inhalation:** If symptoms are experienced, remove source of contamination or move victim to fresh air. If affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting. If the material is swallowed, get medical attention or advice.
- Skin:** If irritation is experienced, rinse with soap and water. If symptoms persist, get medical attention.
- Eyes:** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, get medical attention.

Section 5: FIRE FIGHTING MEASURES

Flash Point: Not Available
Method Used: Not Available
Auto Ignition: Not Available
Flammability Classification: Not Available

Extinguishing Media: Use methods appropriate for the surrounding fire. Consider water spray or fog, carbon dioxide, dry chemical powder, or alcohol resistant foam.

Products of Combustion: Upon decomposition this product may emit carbon dioxide, carbon monoxide and/or low molecular weight hydrocarbons.

Fire Fighting Equipment/Instructions: Wear protective clothing and equipment suitable for the surrounding fire, including helmet, facemask, and self contained breathing apparatus.

NFPA Rating: Health: Not Available Fire: Not Available Reactivity: Not Available
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: For large spills wear gloves, safety glasses and when levels exceed OSHA PEL use appropriate NIOSH approved respiratory protection. Keep unnecessary personnel away.

Methods for Clean-Up: Containerize in approved chemical waste container. Wash spill area.

Section 7: HANDLING AND STORAGE

Handling: Prevent contact with eyes. Avoid inhalation.

Storage: Keep the container tightly closed and in a cool, well ventilated place..

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Talc (14807-96-6)

ACGIH: 1 mg/m³ TWA

OSHA: 2 mg/m³ TWA (if 1% quartz or more, use quartz limit)

Engineering Controls: Normal room ventilation is usually adequate under normal use.

Personal Protective Equipment (PPE)

Eye/Face Protection: None needed under normal use.

Skin Protection: None needed under normal use.

Respiratory Protection: None needed under normal use.

General Hygiene Considerations: Wash hands after use.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color: Off White

Odor: Baby Powder

Physical State: Powder

pH: Not Available

Vapor Density: Not Available

Boiling Point: Not Available

Vapor Pressure: Not Available

Melting Point (Talc): ≈1520°C

Freezing Point: Not Available

Flash Point: Not Available

Flammability Properties: Not Available

Density (talc): 2.57-2.83 g/cm³ at 20°C

Solubility (in water): Not Available

Evaporation Rate: Not Available

Octanol/Water partition coefficient (K_{ow}): Not Available

Auto-ignition temperature: Not Available

Decomposition temperature: Not Available

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal ambient temperatures 70°C (21°C)

Condition to Avoid: Not Available

Incompatible Materials: This product reacts with strong acid, strong bases, and oxidizing agents.

Hazardous Decomposition: upon decomposition, this product evolves carbon monoxide, carbon dioxide, and/or low weight hydrocarbons.

Hazardous Reactions: Hazardous polymerization will not occur.

Section 11: TOXICOLOGY INFORMATION

ACUTE EFFECTS:**A: General Product information**

Not expected to cause irritation when used in accordance to label.

CHRONIC EFFECTS:**Component**

Talc (14807-96-6)

Carcinogenicity: ACGIH A4 – Not Classifiable as a Human Carcinogen (containing no asbestos fibres)

Neurotoxicity: No information available for product.

Mutagenicity: No information available for product.

Reproductive: No information available for product.

Developmental: No information available for product.

Target Organs: Talc can target the CVS, eyes and respiratory system.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Talc (14807-96-6)

96 Hr LC50 Brachydanio rerio:>100 g/L [semi-static]

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state, and local regulations.

Section 14: TRANSPORTATION INFORMATION

This material is not regulated as a hazardous material for transportation.

Section 15: REGULATORY INFORMATION

Talc (CAS 14807-96-6) is on the TSCA inventory.

Section 16: Other Information

Prepared by: Vi-Jon Inc.

Disclaimer:

The information and recommendations contained in the Material Safety Data Sheet (MSDS) are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of this date hereof.

Vi-Jon, however, makes no representation as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the information will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Vi-Jon be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. User assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations.

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This information relates to the material designated and may not be valid for such material used in combination with any other materials nor in any process.

Yeast

April 1, 1999

SECTION I - Product Identification & Address

This Material Safety Data Sheet references the following products:

- **Instant Dry Yeast** Product Codes: 1109-09, 1109-10, 1154-02, 1154-23, 1154-33, 1155-02, 1156-20, 1156-22

Product use: Food ingredient

Lallemand, Inc.
 1620 Préfontaine
 Montréal, Québec H1W 2N8
 Canada

Phone Numbers

Emergency: 514-522-2135
 General Information: 514-522-2133

SECTION II - Hazardous Ingredients / Identity Information

Ingredients	CAS Number	% By Wt.	OSHA PEL	ACGIH TLV
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This product does not meet the definition of a hazardous material given in the U.S. Occupational Safety and Health Administration's Hazard Communication Standard, and is not a controlled product as defined by the Canadian Hazardous Product Act (Bill C70).

SECTION III - Physical / Chemical Characteristics

Appearance : Tan to pale beige powder
 Odor : Mild yeasty odor
 Solubility in Water : Negligible, forms suspension in water
 Boiling Point : Not Applicable
 Vapor Pressure (mm Hg) : Not Applicable
 Vapor Density (Air = 1) : Not Applicable
 Specific Gravity (H₂O = 1) : Not Applicable
 Melting Point : Not Applicable
 Evaporation Rate (Butyl Acetate = 1) : Not Applicable

SECTION IV - Fire and Explosion Hazard Data

Flash Point : Not Applicable
 Flammable Limits (% By Volume In Air) : Not Applicable
 LEL - Not Established
 UEL - Not Established
 Fire Extinguishing Media : Water, dry chemical, foam, or CO₂.
 Special Fire Fighting Procedures : Not Applicable
 Fire and Explosion Hazards : Material becomes slippery when wet.

SECTION V - Reactivity Data

Stability : Stable
 Conditions to Avoid : Not Applicable
 Incompatibility (Materials to Avoid) : Not Established
 Hazardous Decomposition (or Byproducts) : Not Established
 Hazardous Polymerization : Will not occur

SECTION VI - *Health Hazard Data*

Health Hazards (Acute and Chronic)

- Inhalation : Dust may cause irritation to mucous membranes of nose, throat and lungs.
- Eye : Dust may cause mechanical irritation.
- Skin : Repeated contact may cause irritation.
- Ingestion : No known applicable information
- Signs and Symptoms of Exposure : Same as for Health Hazards listed above
- Medical Conditions Generally Aggravated by Exposure : Same as for Health Hazards listed above
- Emergency and First Aid Procedures
- Inhalation : Remove from exposure. If irritation or adverse symptoms develop, seek medical attention.
- Eyes/Skin : Flush with running water. If irritation or adverse symptoms develop, seek medical attention.
- Ingestion : Not Applicable
- Carcinogenicity : Based on information presently available, this product does not meet any of the health hazard definitions of the U.S. CFR Title 29 Section 1910.1200.

SECTION VII - *Precautions for Safe Handling and Use*

Steps to Be Taken in Case Material is Released or Spilled: Wear protective equipment described in Section VIII. Contain spill. Scoop up and place in disposal container; rinse contaminated area with water. Material may also be flushed with water or washed down conventional sewer system.

Waste Disposal Method: Insure conformity with all applicable disposal regulations. Manage in permitted waste management facility. May also be flushed down conventional sewer system.

Precautions to Be Taken in Handling and Storing:

Handling - Avoid contact with eyes, skin and clothing. Wear protective equipment described in Section VIII. Wash thoroughly after handling. Launder contaminated clothing before reuse.

Storage - Store in original container or in clean, covered container. Keep containers sealed and dry. Store in cool, dry, well ventilated area. Avoid storage at elevated temperatures for prolonged periods of time.

Other Precautions: None.

SECTION VIII - *Control Measures - Personal Protection Information*

Respiratory Protection: Not Applicable.

Ventilation: Not Applicable.

Skin Protection (Protective Gloves): Wear protective gloves when handling food ingredients.

Eye Protection: Follow normal industrial eye protection precautions consistent with current Good Manufacturing Practices.

Other Protective Clothing or Equipment: Not Applicable.

Work/Hygienic Practices: Follow current Good Manufacturing Practices when handling food ingredients and materials.

Lallemand, Inc. believes the information contained herein is accurate. No guarantee or warranty of any kind is made with respect to this information.