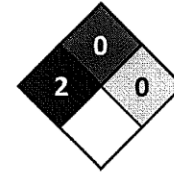




Date Prepared: 04-Nov-2013
Revised: New Issue
SDS ID: TN #5_GHS_001

HMIS Ratings

Health Hazard	2
Fire Hazard	0
Reactivity Hazard	0
Max. Personal Protection	E



SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product trade name(s): Tennessee #5
Common Name(s): Ball Clay, Kaolinic Clay
Chemical Formula: $Al_2Si_2O_5(OH)_4$
CAS Number: 999999-99-4
Physical Form: Light gray to brown solid

Recommended Uses: Non-exhaustive list: Ceramics, ceramic glazes, porcelain insulators, gypsum wallboard, ceiling tile, coal tar sealing emulsions

Restrictions on Use: Food ingredient, cosmetic ingredient, agricultural feed, pesticide

Manufacturer's Name & Address: Kentucky-Tennessee Clay Company
 100 Mansell Court East
 Suite 300
 Roswell, GA 30076

Telephone: 770-594-0660
Fax: 770-645-3460
Customer Service: 800-814-4538

Emergency Telephone: For Chemical Emergency Call CHEMTREC (24 hours): 1-800-424-9300
 (US, Canada, Puerto Rico, Virgin Islands)
 1-703-527-3887 (Outside Above Area) collect calls accepted

SECTION 2: HAZARDS IDENTIFICATION

Contains Crystalline Silica $\geq 1\%$ $\leq 10\%$ Respirable

Classification:

Eye Damage/Irritation	Category 2
Skin Corrosion/Irritation	Category 2
Specific Target Organ Toxicity - Single Exposure	Category 3 - Respiratory
Specific Target Organ Toxicity - Repeated Exposure	Category 1 - Respiratory
Carcinogenicity	Category 1a

Label Elements:



Signal Word:
WARNING

Hazard Statements: H373: May cause damage to lung through prolonged or repeated inhalation.

Precautionary Statements:

P260: Do not breathe dust.
 P285: In case of inadequate ventilation wear respiratory protection.
 P501: Dispose of contents/containers in accordance with local regulation.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient	Weight % (Approx.)	CAS N°	EINECS N°
Kaolin	60% - 90%	1332-58-7	310-194-1
Quartz - Crystalline Silica	10% - 30%	14808-60-7	238-878-4
Titanium Dioxide	1% - 5%	13463-67-7	136-675-5
Water	1% - 20%	7732-18-5	215-185-5

SECTION 4: FIRST AID MEASURES**Inhalation**

If adverse effects occur, get immediate medical attention. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial

Skin

Wash immediately with soap and water. Get medical attention if irritation develops or persists.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion

DO NOT induce vomiting. If swallowed, drink plenty of water, do NOT induce vomiting. Never make an unconscious person vomit or drink fluids. Get medical attention.

Symptoms: Immediate

eye irritation, skin irritation, respiratory tract irritation

Symptoms: Delayed

gastrointestinal effects

SECTION 5: FIREFIGHTING MEASURES**Flammable Properties**

Product is non-flammable.
Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

No hazard is expected from the normal use of this product.

Fire Fighting Measures

No hazard expected

NFPA 704M Hazard Classification: Health: 2 Flammable: 0 Reactivity: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Keep unnecessary people away, isolate hazard area and deny entry. Wet material is slippery under foot.
Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Cleanup Methods

Collect spilled material in appropriate container for reuse or disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid dust generation and accumulation. Do not use in poorly ventilated or confined spaces. Do not taste or swallow.
Avoid inhalation or contact. Wash thoroughly after handling.

Conditions for Safe Storage

Store in a cool, dry place. Store in a well-ventilated area.

SAFETY DATA SHEET

Product Name: **Tennessee #5**
 SDS ID: TN #5_GHS_001

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

Follow standard occupational hygiene control methods and procedures. Use an approved respirator if exposure limits are exceeded or if exposure limits are exceeded or if irritation develops or persists.

Component Exposure Limits:

Hazardous Ingredient	Weight % (Approx.)	CAS N°	OSHA PEL*	ACGIH TLV*
Kaolin	60% - 90%	1332-58-7	15 mg/m ³ (Total Dust) 5 mg/m ³ (Respirable Fraction)	2 mg/m ³ (Respirable Fraction)
Quartz - Crystalline Silica (Respirable Fraction 1-10%)	10% - 30%	14808-60-7	0.1mg/m ³ (Respirable Fraction)	0.025 mg/m ³ (Respirable Fraction)
Titanium Dioxide (Naturally Occurring)	1% - 5%	13463-67-7	15 mg/m ³ (Total Dust)	10 mg/m ³ (Total Dust)

* Unless otherwise noted, all PEL and TLV are reported as 8 hour time weighted average (TWA).

Component Analysis

There are no biological limit values for any of this product's components.

Engineering Controls

Ventilation: Use exhaust ventilation, if required, to maintain dust concentration below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Where there is potential for airborne exposure, use of a MSHA/NIOSH or OSHA/NIOSH approved respirator is recommended.

Eyes/Face: Wear side shield safety glasses or chemical resistant safety goggles.

Glove Recommendation: Rubber gloves are recommended for prolonged exposure.

Protective Clothing: Wear appropriate chemical resistant clothing. Contaminated clothing should be removed and laundered before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Solid	Appearance: light gray to brown solid
Color: light gray to brown	Physical Form: powder to lump
Odor: earthy odor	Odor Threshold: Not applicable
pH: 4-6 (aqueous solution)	Melting Point: > 1500°C
Boiling Point: Not applicable	Flash Point: Will not ignite
Decomposition: loses crystalline water at > 500°C (930°F)	Evaporation Rate: Not applicable
LEL: Not applicable	UEL: Not applicable
Vapor Pressure: Not applicable	Vapor Density (air = 1): Not applicable
Density: Not applicable	Specific Gravity (water = 1): ~2.6 gm/cc
Water Solubility: None	Coeff> Water/Oil Dist: Not applicable
Auto Ignition: Will not ignite	Viscosity: Not applicable
Flow Point: Not applicable	Sublimation Point: Not applicable
VOC: None	

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 10: STABILITY AND REACTIVITY****Reactivity:**

No reactive hazard is expected.

Chemical Stability:

Stable at normal temperatures and pressure

Possibility of Hazardous Reactions:

Will not oxidize or polymerize.

Conditions to avoid:

None known.

Materials to Avoid (Incompatibilities):

None known.

Decomposition Products:

When exposed to high temperatures, free quartz can change crystal structure to form tridymite (above 870°C) or cristobalite (above 1470°C) which have greater health hazards than quartz. (Tridymite and cristobalite (TWA-TLV) =0.025 mg/m³.)

SECTION 11: TOXICOLOGICAL INFORMATION**Primary Route of Exposure:** Skin, Eye Contact, Inhalation and Ingestion**Acute Health Hazards:**

Eye contact may cause mechanical irritation.

Skin contact may aggravate existing dermatitis.

Inhalation from prolonged and continuous exposure to excessive quantities of dust may aggravate existing asthmatic or respiratory conditions.

Acute and Chronic Toxicity

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation. May cause damage to respiratory tract through prolonged or repeated exposure.

Occupationally inhaled ball clay produced pulmonary fibrosis with sites of action being the lung, the lymph nodes and the hilus.

Ball clay when taken orally over a long period of time can cause granulomas of the stomach.

Exposure to quartz (the most stable and common form of crystalline silica) is responsible for the majority of clinically diagnosed silicosis. Silicosis is a fibronodular lung disease that occurs after occupational exposure to crystalline silica for 5 years or longer. Inhalation of quartz dusts may cause shortness of breath, limitation of chest expansion, dry cough, and a lessened capacity for work. Individuals with a pre-existing disease in, or a history of ailments involving the skin or respiratory tract, are at greater risk for developing adverse health effects when exposed to this material.

In humans, chronic intermittent exposure to quartz caused pulmonary fibrosis, cough, and difficulty breathing. Overexposure to crystalline silica may cause silicosis, a form of disabling, progressive, and sometimes fatal pulmonary fibrosis characterized by the presence of typical nodulation in the lungs. Tuberculosis frequently complicates silicosis and the risk for tuberculosis is also increased in workers exposed to silica who have no radiographic evidence of silicosis. Crystalline silica can cause silicotic lesions in such organs as the liver, spleen and bone marrow. In humans, a causal relationship exists between exposure to crystalline silica and the development of autoimmune diseases. In multi-dose studies with animals, long term inhalation of quartz affected the lungs, endocrine system, immune system and blood.

This product contains quartz (respirable) as an impurity. Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France.)

The material may contain trace amounts (parts per trillion) of naturally occurring dioxin congeners (PCDD, PCDF) including TCDD. 2, 3, 7,8-TCDD has been classified as a known human carcinogen by the IARC in Monograph 69 (1997).

These trace amounts are not believed to be a health risk, but Special Protections and Special Precautions (Section 8) are advised.

IARC Monograph Vol. 69 (1997) concludes that 2,3,7,8-TCDD (dioxin) is carcinogenic to humans.

Methods of transmission may include inhalation, ingestion or dermal absorption.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: **TN #5_GHS_001****Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Quartz - Crystalline Silica (14808-60-7)

Oral LD50 Rat 500 mg/kg

Titanium dioxide (13463-67-7)

Oral LD50 >10000 mg/kg

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Irritation/Corrosivity Data

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation.

Respiratory Sensitizer

No test data available

Dermal Sensitizer

No test data available

Carcinogenicity**Component Carcinogenicity****Kaolin - CAS N° 1332-58-7****ACGIH:** A4 - Not Classifiable as a Human Carcinogen**Quartz - Crystalline Silica - CAS N° 14808-60-7****ACGIH:** A2 - Suspected Human Carcinogen**IARC:** Group 1 - Carcinogenic to humans**Titanium dioxide - CAS N° 13463-67-7****ACGIH:** A4 - Not Classifiable as a Human Carcinogen**IARC:** Group 2B - Possibly carcinogenic to humans**Mutagenic Data**

No information available

Reproductive Effects Data

No information available

Specific Organ Toxicity - Single Exposure

Target organs include ears, skin, respiratory system, and gastrointestinal tract.

Specific Organ Toxicity - Repeated Exposure

Causes damage to eyes, skin, respiratory system, and gastrointestinal tract through prolonged or repeated exposure.

Aspiration Hazard

No data available

Medical Conditions Aggravated by Exposure

Individuals with pre-existing eye disorders, skin disorders, respiratory disorders and/or gastrointestinal disorders may have increased susceptibility to the effects of exposure.

SAFETY DATA SHEET

Product Name: **Tennessee #5**
SDS ID: TN #5_GHS_001

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

No information available for the product

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components

No information available for the product

Bioaccumulation

No information available for the product

Bioconcentration

This material is not believed to bioconcentrate

Biodegradation

This product is made from a naturally occurring, abundant, innocuous mineral

Persistence

This product is made from a naturally occurring, abundant, innocuous mineral

Mobility in Soil:

This product is insoluble in water

Results of PBT and vPvB Assessment

Not relevant

Other Toxicity

May affect turbidity if discharged in large quantities to lakes, streams or sewers.

SECTION 13: DISPOSAL CONSIDERATIONS

Non-hazardous waste - RCRA (40 CFR 261)

Dispose of waste materials in accordance with all local, state, and Federal requirements.

This product may not be disposed of in waterways or sewers.

SECTION 14: TRANSPORT INFORMATION

EPA Waste Number: Not regulated.

DOT Classification: Not regulated.

IMO Classification: Not regulated.

Internal UN: Not regulated.

IMDG Code: This product is not considered to be a marine pollutant.

SAFETY DATA SHEET

Product Name: **Tennessee #5**
SDS ID: **TN #5_GHS_001**

SECTION 15: REGULATORY INFORMATION

SARA Title III Section 302 Extremely Hazardous Substances: This product does not contain extremely hazardous subject to the reporting requirements of Section 302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 355.

SARA Title III Section 311 and 312 Health and Physical Hazard Categories per 40 CFR 370.2:

Immediate	Delayed	Fire	Pressure	Reactivity
Yes	Yes	No	No	No

SARA Section 313 Notification: This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: Product is listed in Initial Inventory, Vol. 1, Appendix A, CAS No. 1332-58-7

CERCLA: Ball Clay is not a CERCLA listed hazardous substance.

California Proposition 65: WARNING: This product may also contain extremely small amounts of one or more naturally-occurring materials known to the State of California to cause cancer, birth defects, or other reproductive harm.

NJ Special Health Hazardous Substances List [4]: RTK Hazardous Substance List; Substance number 4016.

PA Special Hazardous Substances List: Regulated under PA Code Chapter 323.

Stockholm Convention: This product is not subject to the Stockholm Convention.

Montreal Protocol: This product is not subject to the Montreal Protocol.

Rotterdam Convention: This product is not subject to the Rotterdam Convention.

National Inventories:

DSL (Canada): Listed
NDSL (Canada): Not Listed
PICCS (Philippines): Listed
KECI (Korea): Listed
ENCS (MITI) (Japan): Listed
AICS (Australia): Listed
IECSC (China): Listed
EINECS (Europe): Listed

REACH Status: Exempt (Annex v.7). Product is a naturally occurring mineral.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 16: OTHER INFORMATION****Training**

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

Summary of Changes

New SDS 04-Nov-2013

Key / Legend

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
DOT	Department of Transportation
DSL	Canadian Domestic Substances List
EINECS	European Inventory of New and Existing Chemical Substances
ENCS	Existing and New Substances Inventory
EPA	Environmental Protection Agency
FDA	Food and Drug Administration
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
IMDG	International Maritime Dangerous Goods Code
IMO	International Maritime Organization
KECI	Korean Existing Chemicals Inventory
LEL	Lower Explosive Limit
LOLI	List Of Lists
MITI	Japanese Ministry of International Trade and Industry
MSHA	Mine Safety and Health Administration
NDSL	Canadian Non-Domestic Substance List
NIOSH	National Institute of Occupational Safety and Health
NFPA	National Fire Protection Agency
OSHA	Occupational Health and Safety Administration
PBT	Persistent Bioaccumulative Toxic Chemical
PEL	Permissible Exposure Limit
PICCS	Philippine Inventory of Chemicals and Chemical Substances
RCRA	Resource Conservation and Recovery Act
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UEL	Upper Explosive Limit
UN	United Nations
VOC	Volatile Organic Content
vPvB	Very Powerful Very Bioaccumulative

SAFETY DATA SHEET

Product Name: **Tennessee #5**
SDS ID: **TN #5_GHS_001**

Disclaimer

Such information is to the best of IMERYS knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. IMERYS NORTH AMERICA CERAMICS MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

IMERYS is a business name that includes Imerys North America Ceramics of which Kentucky-Tennessee Clay Company is a member. Registered in the USA. Registered office: 100 Mansell Court East, Suite 300, Roswell, GA 30076

Prepared By: Imerys North America Ceramics Technical Group.

END OF SHEET

TN #5_GHS_001

Schultz® Liquid Plant Food – All Analyses

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 11/12/2014 Date of issue: 07/31/2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE

1.1. Product Identifier

Product Form: Mixture

Product Name: Schultz Liquid Plant Food -- All Analyses

1.2. Intended Use of the Product

Use of the substance/mixture: Fertilizer

1.3. Details of the Supplier of the Safety Data Sheet

Knox Fertilizer Company, Inc.

P.O. Box 248

Knox, IN 46534

TEL: 574-772-6275

1.4. Emergency Telephone Number

Emergency Number: CHEMTREC 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315
Eye Irrit. 2B	H320
STOT SE 3	H335
Aquatic Acute 2	H401
Aquatic Chronic 3	H412

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US):



Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H302 - Harmful if swallowed
H315 - Causes skin irritation
H320 - Causes serious eye irritation
H335 - May cause respiratory irritation
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements (GHS-US)

: P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing should not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear eye protection, protective gloves, protective clothing
P302+P352 - IF ON SKIN: Wash with plenty of water
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

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P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center/doctor if you feel unwell
P321 - Specific treatment (see Section 4 on this label)
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P362+P364 - Take off contaminated clothing and wash it before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container according to local, regional, national, and international regulations

2.3. Other Hazards

Other Hazards: No additional information available

2.4. Unknown Acute Toxicity (GHS-US)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture (Exact percentages of ingredients are being withheld as a trade secret)

Name	Product identifier	%	Classification (GHS-US)
Urea	(CAS No) 57-13-6	0.0 - 100	Skin Irrit. 2, H315 Eye Irrit. 2B, H320
Potassium Nitrate	(CAS No) 7757-79-1	0.0 - 100	Eye Irrit. 2B, H320
Monopotassium Phosphate	(CAS No) 7778-77-0	0.0 - 100	Not classified
Monoammonium Phosphate	(CAS No) 7722-76-1	0.0 - 100	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Potassium Tripolyphosphate (KTPP)	(CAS No)	0.0 - 100	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Iron (III) EDTA	(CAS No) 15708-41-5	0.0 - 5	Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Manganese EDTA	(CAS No) 15375-84-5	0.0 - 5	Eye Irrit. 2B, H320
Zinc EDTA	(CAS No) 14025-21-9	0.0 - 5	Not Classified

Full text of H-phrases: see section 1

Schultz® Liquid Plant Food – All Analyses

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SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

First-aid Measures General: If medical advice is needed, have product container or label at hand.

First-aid Measures After Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Wash skin thoroughly with mild soap and water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

First-aid Measures After Eye Contact: Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Obtain medical attention if irritation develops or persists.

First-aid Measures After Ingestion: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms/Injuries: 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

If medical advice is needed, have product container or label at hand.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Not considered flammable but will burn at high temperatures. Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: None known.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Decomposes above 132 °C (270 °F). Under conditions of fire this material may produce: Ammonia. Nitrogen oxides. Biuret. Cyanuric acid.

Explosion Hazard: May form explosive compounds if mixed with: Calcium hypochlorite. Sodium hypochlorite. Nitrates. Nitric acid. Perchloric acid. Product itself is not explosive but if dust is generated, dust clouds suspended in air can be explosive.

Reactivity: This product as shipped in the form of coarse granules should not contain sufficient dust to present an explosion hazard. Prevent dust accumulation (to minimize explosion hazard).

5.3. Advice for Firefighters

Firefighting Instructions: Not flammable.

Protection During Firefighting: Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Other information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Handle in accordance with good industrial hygiene and safety practice. This material becomes slippery when wet.

6.1.1. For Non-emergency Personnel

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: Collect as any solid. Ventilate area. Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Wear suitable protective clothing, gloves and eye/face protection.

Emergency Procedures: If possible, stop flow of product. Contain and collect as any solid. Ventilate area. Evacuate unnecessary personnel.

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6.2. Environmental Precautions

Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

Methods for Cleaning Up: Soak up spills with inert solids such as clay or diatomaceous earth as soon as possible. Collect spillage. Do not allow into drains or water courses or dispose of where ground or surface waters may be affected.

6.4. Reference to Other Sections: No additional information available

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Precautions for Safe Handling: Handle in accordance with good industrial hygiene and safety procedures. Wear recommended personal protective equipment.

Hygiene Measures: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store tightly closed in a dry, cool and well-ventilated place. Protect from moisture.

Prohibitions on mixed storage: Store away from: Ammonium nitrate. Refer to Section 10 on Incompatible Materials.

Special Rules on Packaging: Corrosive to copper and its alloys.

7.3. Specific End Use(s)

Fertilizer.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

8.1. Control Parameters

No additional information available

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection. For particulates and dust: Safety glasses.



Hand Protection: Protective Gloves.

Eye Protection: Safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

Environmental Exposure Controls: Ensure adequate ventilation, especially in confined areas.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State:	Liquid.
Color:	Light Blue.
Odor:	Characteristic
Odor Threshold	N/A
pH:	N/A
pH solution:	N/A
Relative Evaporation Rate (butylacetate=1):	N/A
Melting Point:	N/A
Freezing Point:	N/A

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Boiling Point:	N/A
Flash Point:	N/A
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flammability (solid, gas):	No data available
Vapor Pressure:	N/A
Relative Vapor Density at 20° C:	No data available
Relative Density:	No data available
Density:	No data available
Solubility: Water:	Readily soluble
Partition coefficient: n-octanol/water:	No data available
Viscosity:	N/A

9.2. Other Information No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: This product as shipped in the form of fine crystals/granules should not contain sufficient dust to present an explosion hazard. Prevent dust accumulation (to minimize explosion hazard).

10.2. Chemical Stability: Stable at standard temperature and pressure.

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Protect from moisture. Keep away from heat.

10.5. Incompatible Materials: May form explosive mixture if in contact with strong acid such as nitric or perchloric acids. Avoid contact with: Strong oxidizers. Strong acids, bases. Nitrates. Hypochlorites. Perchlorates. Chlorides. Corrosive to copper and its alloys.

10.6. Hazardous Decomposition Products: Under conditions of fire this material may produce: Nitrogen oxides. Ammonia. Biuret. Carbon oxides (CO, CO₂). Formaldehyde.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information On Toxicological Effects

Acute Toxicity: Not classified

Monoammonium Phosphate (7722-76-1)	
LD₅₀ Oral Rat	5750 mg/kg
LD₅₀ Dermal Rabbit	>7940 mg/kg
ATE US (Oral)	5750.0000 mg/kg body weight
Monopotassium Phosphate (7778-77-0)	
LD₅₀ Oral Rat	7100 mg/kg
LD₅₀ Dermal Rabbit	>4640 mg/kg
ATE US (Oral)	7100.0000 mg/kg body weight
Potassium Nitrate (7757-79-1)	
LD₅₀ Oral Rat	3750 mg/kg
LD₅₀ Dermal Rat	>5000 mg/kg
ATE US (Oral)	3750.0000 mg/kg body weight
Urea (57-13-6)	
LD₅₀ Oral Rat	8471 mg/kg
LD₅₀ Dermal Rat	>3200 mg/kg
LD₅₀ Dermal Rabbit	>21000 mg/kg
ATE US (Oral)	8471.0000 mg/kg body weight

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Iron (III) EDTA (15708-41-5)	
LD ₅₀ Oral Rat	5000 mg/kg
ATE (Oral)	5000.0000 mg/kg body weight

Ingestion: Harmful if swallowed.

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Causes eye irritation.

Skin Sensitization: Causes skin irritation.

Respiratory: May cause respiratory irritation.

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified.

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause eye irritation.

Symptoms/Injuries After Ingestion: If a large quantity has been ingested: Abdominal pain. Diarrhea. Nausea. Vomiting.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Monoammonium Phosphate (7722-76-1)	
LC ₅₀ Fish 1	155 ppm (Exposure time: 96 h - Species: <i>Pimephales promelas</i>)
Urea (57-13-6)	
LC ₅₀ Fish 1	>6810 mg/l (Exposure time: 96 h - Species: <i>Leuciscus idus</i>)
EC ₅₀ Daphnia 1	> 10000 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)
LC ₅₀ Fish 2	17500 mg/l (Exposure time: 96 h - Species: <i>Poecilia reticulata</i>)
EC ₅₀ Daphnia 2	> 10000 mg/l (Exposure time: 24 h - Species: <i>Daphnia magna</i>)
Threshold limit other aquatics 1	120000 mg/l (Exposure time: 16 h - Species: <i>Bacteria</i> ; Toxicity Test)
Threshold limit other aquatics 1	>10000 mg/l (Species: <i>Pseudomonas putida</i>)
Threshold limit Algae 1	> 10000 mg/l (Exposure time: 168 h - Species: <i>S. quadricauda</i>)
Potassium Nitrate (7757-79-1)	
LC ₅₀ Fish 1	162 mg/l (Exposure time: 96 h - Species: <i>Pisces sp.</i> ; Lethal)
EC ₅₀ Daphnia 1	39 mg/l (Exposure time: 96 h - Species: <i>Daphnia magna</i>)
LC ₅₀ Fish 2	1378 mg/l (Exposure time: 96 h - Species: <i>Poecilia reticulata</i>)
EC ₅₀ Daphnia 2	490 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)
Threshold limit Fish 1	3000 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i>)
Threshold limit Fish 2	162 mg/l (Exposure time: 96 h - Species: <i>Gambusia affinis</i>)
Monopotassium Phosphate (7778-77-0)	
LC ₅₀ Fish 1	>900 mg/l (Exposure time: 48 h - Species: <i>Leuciscus idus</i>)
EC ₅₀ Other Aquatic Organisms 1	2 ppm (Exposure time: 672 h - Species: <i>Potamogeton sp.</i>)
Threshold Limit Algae 1	1 ppm (Exposure time: 672h - Species: <i>Elodea sp.</i>)

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Iron (III) (15708-41-5)	
LC ₅₀ Fish 1	2592 mg/l (Exposure time: 96 h - Species: <i>Pisces</i>)

12.2. Persistence and Degradability

Schultz Liquid Plant Food – All Analyses	
Persistence and Degradability	May cause long-term adverse effects in the environment. This product is water soluble and eventually biodegrades into elemental nitrogen. Excess nitrogen and nitrates in a body of water will contribute to eutrophication with visible effects such as toxic algae bloom.

12.3. Bioaccumulative Potential

Monoammonium Phosphate (7722-76-1)	
Bioaccumulative Potential	(no bioaccumulation expected)
Potassium Nitrate (7757-79-1)	
Bioaccumulative Potential	Not Established
Urea (57-13-6)	
BCF fish 1	< 10
Log Pow	-1.59 (at 25 °C)
Bioaccumulative Potential	Not Established
Monopotassium Phosphate (7778-77-0)	
Bioaccumulative Potential	Not Established

12.4. Mobility in Soil: No additional information available.

12.5. Other Adverse Effects: No additional information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

Waste Disposal Recommendations: Place in an appropriate container and dispose of the contaminated material at a licensed site.

Additional Information: Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT: Not regulated for transport

14.2. In Accordance with IMDG: Not regulated for transport

14.3. In Accordance with IATA: Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Schultz Water Soluble Fertilizer – All Analyses
NOT Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed on the United States TSCA (Toxic Substances Control Act) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable *de minimis* concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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15.2. US State Regulations: No additional information available.

SECTION 16: OTHER INFORMATION

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

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Aquatic Acute 2	Toxic to aquatic environment - Acute Hazard Category 2
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H302	Harmful if swallowed
H315	Causes skin irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H401	Toxic to aquatic life
H412	Harmful to aquatic life with long lasting effects

DISCLAIMER: The information contained in this SDS is based on available data. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof; and you should make your own investigation to determine safety for the use you intend. Knox Fertilizer Company, Inc. makes no warranty of merchantability of fitness for a particular use, nor is there any other express or implied warranty except as may be specifically provided otherwise on the product. Knox Fertilizer Company, Inc. assumes no responsibility or liability for any incidental or consequential damages whether related to personal injury or property damage, to buyers, users or third parties, caused by the product and Knox Fertilizer's responsibility is limited to replacement of, or repayment of, the purchase price for the product with respect to which any damages are claimed. All buyers or users assume all risk with the use of the product.

Safety Data Sheet**Section 1: Identification of the Substance/Mixture and of the Company/Undertaking****1.1 Product identifier****Product Name**

- **Common Salt without Additives**

Synonyms

- All Purpose Natural Sea Salt; All Purpose Purex Salt; Bunny Spool (Plain Salt); California Pure Coarse Sea Salt; California Pure Fine Sea Salt; California Pure Medium Sea Salt; Canning & Pickling Salt; Commercial Grade, Water Softening Pellets; Culinox 999 Chemical Grade Salt; Culinox 999 Fine Salt; Culinox 999 Food Grade Salt; Evaporated Granulated Salt; Evaporated Salt Pellets; Feed Mixing Salt, Northern Rock, F & R; Fine Mixing Salt; H.G. Blending Salt; Hay & Stock Salt, F&R; Industrial Crude Solar Salt; KD Crude Solar Salt; Kleer Fine Salt; Kleer Granulated Salt; Mill Run Salt; Natural Coarse Sea Salt; Northern Fine +20 Rock Salt; Plain Salt Block; Plain Salt Brick; Pool Salt; Professional's Choice Pool Salt; Purex Salt; Purex Select Salt; Reagent Grade Sodium Chloride; Refined Sea Salt; Rock Pretzel Salt; Rock Salt for Making Ice Cream; Safe-T-Salt (bagged w/o YPS); Sea Salt Grinder; Sea Salt Grinder Reill; Select Extra Coarse Rock Salt; Service Pack Salt (all); Ship n' Shore Rock Salt; Solar Salt Water Softening Crystals; Stock Salt; USP Sodium Chloride; Valu-Soft Solar Salt; Water Softening Salt (Undried) Coarse; Water Softening Salt (Undried) Extra Coarse; White Crystal Brine Block (50 lb); White Crystal Rock Salt (all); White Crystal Solar Salt (all); White Crystal Water Softening Solar Salt (all); White Pretzel Salt; Dried Coarse Salt

CAS Number

- 7647-14-5

Product Code

- MSDS Code: 100

1.2 Relevant identified uses of the substance or mixture and uses advised against**Relevant identified use(s)**

- Food, Chemical and Drug Processing; Pharmaceuticals; Water Conditioning; Ice Control; Chemical Feedstock – see product data sheets for more information

1.3 Details of the supplier of the safety data sheet**Manufacturer**

- Morton Salt, Inc.
123 N. Wacker Drive
Chicago, IL 60606
United States

saltinfo@mortonsalt.com

Telephone (General) • 312-807-2000

1.4 Emergency telephone number**Manufacturer**

- 312-807-2000

Section 2: Hazards Identification**EU/EEC**

According to EU Directive 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]
According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

Section 3 - Composition/Information on Ingredients

3.1 Substances

Non-Hazardous Components					
Chemical Name	Identifiers	%(weight)	LD50/LC50	Classifications According to Regulation/Directive	Comments
Sodium chloride	CAS:7647-14-5 EC Number:231-598-3	> 99%	Ingestion/Oral-Rat LD50 • 3000 mg/kg	EU DSD/DPD: Not Classified - Criteria not met EU CLP: Not Classified - Criteria not met OSHA HCS 2012: Not Classified - Criteria not met	May contain small quantities of naturally occurring calcium and magnesium salts

3.2 Mixtures

- Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing.

Skin

- IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

Eye

- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.

Ingestion

- If large quantities are swallowed, call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media

- Material is non-combustible. In case of fire use media as appropriate for surrounding fire.

Unsuitable Extinguishing Media

- No data available.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- No unusual fire or explosion hazards known.

Hazardous Combustion Products

- No data available

5.3 Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Wear suitable protective clothing, gloves, and eye/face protection.

Emergency Procedures

- Stop leak if you can do it without risk. Keep unauthorized personnel away. Use normal clean up procedures.

6.2 Environmental precautions

- None expected to be necessary if material is used under ordinary conditions and as recommended.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Use good safety and industrial hygiene practices. Wash thoroughly after handling. Keep out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Avoid storage with strong acids and strong oxidizing agents.

Incompatible Materials or Ignition Sources

- Strong oxidizing agents, strong acids.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines

- No applicable exposure limits available for product or components.

8.2 Exposure controls

Engineering Measures/Controls

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Personal Protective Equipment

Pictograms



Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/Face

- Wear safety glasses.

Skin/Body	<ul style="list-style-type: none"> Wear appropriate gloves.
General Industrial Hygiene Considerations	<ul style="list-style-type: none"> Do not get in eyes or on skin or clothing. Handle in accordance with good industrial hygiene and safety practice.
Environmental Exposure Controls	<ul style="list-style-type: none"> Follow best practice for site management and disposal of waste.

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Colorless to white crystalline or compressed block/pellet.
Color	Colorless to White.	Odor	Odorless
Particulate Type	Dust Crystalline	Particulate Size	Variable
Odor Threshold	Data lacking		
General Properties			
Boiling Point	1413 to 1461 C(2575.4 to 2661.8 F)	Melting Point	801 C(1473.8 F)
Decomposition Temperature	Data lacking	pH	7 Approximately
Specific Gravity/Relative Density	2.165 Water=1	Bulk Density	Variable
Water Solubility	Soluble 0.36 g/cc @ 20 C(68 F)	Viscosity	Not relevant
Explosive Properties	Not relevant.	Oxidizing Properties:	Not relevant.
Volatility			
Vapor Pressure	Not relevant	Vapor Density	Not relevant
Evaporation Rate	Not relevant		
Flammability			
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Not relevant
Flammability (solid, gas)	Not flammable.		
Environmental			
Octanol/Water Partition coefficient	Not relevant		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents, strong acids.

10.6 Hazardous decomposition products

- Will react with strong acids to generate hydrogen chloride and with strong oxidizing agents to generate chlorine gas.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Component Name	CAS	Data
Sodium chloride (> 99%)	7647-14-5	Acute Toxicity: orl-rat LD50:3000 mg/kg
GHS Properties		Classification
Acute toxicity		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Carcinogenicity		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin corrosion/Irritation		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Skin sensitization		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-RE		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
STOT-SE		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Toxicity for Reproduction		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Respiratory sensitization		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation		EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

Acute (Immediate)

- Under normal conditions of use, no health effects are expected. Inhalation of dust may cause mild irritation to mucous membranes, nose and throat. Symptoms may include coughing, dryness and sore throat.

Chronic (Delayed)

- No data available.

Skin

Acute (Immediate)

- Under normal conditions of use, no health effects are expected.

Chronic (Delayed)

- No data available.

Eye**Acute (Immediate)**

- Based upon practical use and experience using this product eye irritation is not expected to occur.

Chronic (Delayed)

- No data available.

Ingestion**Acute (Immediate)**

- Ingestion may cause the following symptoms - diarrhea.

Chronic (Delayed)

- No data available.

Key to abbreviations

LD = Lethal Dose

Section 12 - Ecological Information**12.1 Toxicity**

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods****Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not regulated	NDA	NDA	NDA
TDG	NDA	Not regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not regulated	NDA	NDA	NDA

IATA/ICAO	NDA	Not regulated	NDA	NDA	NDA
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14.6 Special precautions for user • None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • Not relevant.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • None

State Right To Know				
Component	CAS	MA	NJ	PA
Sodium chloride	7647-14-5	No	No	No

Inventory						
Component	CAS	Canada DSL	Canada NDSL	China	EU EINECS	EU ELNICS
Sodium chloride	7647-14-5	Yes	No	Yes	Yes	No

Inventory (Con't.)				
Component	CAS	Japan ENCS	Korea KECL	TSCA
Sodium chloride	7647-14-5	Yes	Yes	Yes

Canada

Labor

Canada - WHMIS - Classifications of Substances

- Sodium chloride 7647-14-5 > 99% Uncontrolled product according to WHMIS classification criteria

Canada - WHMIS - Ingredient Disclosure List

- Sodium chloride 7647-14-5 > 99% Not Listed

Environment

Canada - CEPA - Priority Substances List

- Sodium chloride 7647-14-5 > 99% Not Listed

Europe

Other

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Classification

- Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Concentration Limits

- Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Labelling

- Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Notes - Substances and Preparations

- Sodium chloride 7647-14-5 > 99% Not Listed

EU - CLP (1272/2008) - Annex VI - Table 3.2 - Safety Phrases

- Sodium chloride 7647-14-5 > 99% Not Listed

Mexico

Other

Mexico - Hazard Classifications

- Sodium chloride 7647-14-5 > 99% Not Listed

Mexico - Regulated Substances

- Sodium chloride 7647-14-5 > 99% Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

- Sodium chloride 7647-14-5 > 99% Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

- Sodium chloride 7647-14-5 > 99% Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

- Sodium chloride 7647-14-5 > 99% Not Listed

United States - Pennsylvania

Labor

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

- Sodium chloride 7647-14-5 > 99% Not Listed

U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances

- Sodium chloride 7647-14-5 > 99% Not Listed

United States - Rhode Island

Labor

U.S. - Rhode Island - Hazardous Substance List

- Sodium chloride 7647-14-5 > 99% Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date ● 18/February 2014

Preparation Date ● 09/August/2012

Disclaimer/Statement of Liability

- 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 use of this material. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations. Nothing contained herein is to be construed as a recommendation for use in violation of any patents or of applicable laws or regulations.

Key to abbreviations

NDA = No data available

SAFETY DATA SHEET – JUNE 10, 2015



Section 1 – Identification

Product Identifier:	Silica Sand
Trade Names:	Holliston Sand Products, Slater Farms Products
Product Uses:	Filtration Media, Foundry Sand, Industrial Fillers, Bio-retention and Agricultural Sand, Sports Turf, Recreational Products, Commercial Products, Traction Sand Not recommended for sand-blasting.
Manufacturer's Name:	Holliston Sand Company, Inc.
Manufacturer's Address	PO Box 1168, Slatersville, RI 02876
Manufacturer's Telephone	401.766.5010, Monday – Friday, 7:00am to 5:00pm
Manufacturer's Facsimile:	401.762.4976
Emergency Telephone	401.766.5010, Monday – Friday, 7:00am to 5:00pm

Section 2 – Hazards Identification

GHS – US Classification and Label Elements:

Health:

Category 1A – Carcinogen		
Category 1 - Specific Target Organ Toxicity (STOT) following repeated exposures		
Category 2B - Eye Irritation		
Signal Word (GHS-US) - DANGER		
GHS-US Labeling / Hazard Pictograms	 GHS08	 GHS07

Hazard Statements (GHS-US)

H335	May cause eye and respiratory irritation
H350	May cause cancer by inhalation
H372	Causes damage to organs through prolonged or repeated exposure by inhalation.

Precautionary Statements (GHS-US)

P202 – SDS - Read all safety precautions prior to handling.	P264 – Wash thoroughly after handling.
P308 / P313/P314/P304 – Call for medical attention if not well or uncomfortable. If inhaled, provide fresh air.	
P260 / P280 – Never breathe dust. Wear PPE prior to use.	P271 – Use in a well ventilated area.
P403 – Store properly. Closed container.	P501 – Dispose of according to local / regional regulations.

Section 3 – Composition

Name	Product Identifier	Percentage (%)	GHS-US Classification
Quartz	CAS #: 14808-60-7	85 – 99.9	Carc. 1A, H350, STOT SE 3, H335, STOT RE 1, H372

Section 4 – First Aid Measures

ANY SERIOUS INJURY OR UNCONSCIOUSNESS OBSERVATION SHOULD BE AN AUTOMATIC EMERGENCY CALL TO 911.

Inhalation – Move person to a clear area, provide fresh air. Provide medical or emergency attention.

Eye – Flush eye / eyes with water as needed. Provide medical attention as necessary.

Skin – Simple abrasions should be cleansed with mild soap and water. Provide medical attention as necessary.

Ingestion – Discomfort should be followed up with medical attention.

Signs and Symptoms of Exposure - Symptoms of silicosis may first appear 15 to 20 years after someone's exposure to crystalline silica. As the disease progresses, symptoms may include:

<i>Shortness of breath</i>	<i>Severe Cough</i>	<i>Weakness</i>
If you have silica in your lungs, your body may not be able to fight infections well. This can lead to other illnesses that can cause.		
<i>Chest Pains</i>	<i>Weight Loss</i>	<i>Night Sweats</i>
<i>Respiratory Failure</i>	<i>Fever</i>	

As the disease progresses over time, these symptoms can become worse. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as six months, are the same as those associated with chronic silicosis. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Section 5 – Fire Fighting Measures

Extinguishing Media:	Compatible with all media. Use appropriate media for surrounding fire.
Unusual Fire and Explosion Habits:	None known.
Special Fire Fighting Procedure:	None known. Not flammable. Use normal fire fighting equipment.
Hazardous Combustion Products:	None known.



Section 6 – Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
 - General measures.
 - Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.
 - For non-emergency / emergency personnel.
 - Wear suitable protective clothing, gloves, eye and face protection. Use recommended respiratory protection. Collect as any solid.
- Environmental Precautions – no additional information available
- Methods and Material for Containment and Clean-up
 - Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.

Section 7 – Handling and Storage

- This product is not to be used for abrasive blasting without proper equipment and training. Do not breathe dust, which may be created during handling of this product.
- Engineering measures and good housekeeping are essential to preventing accumulation of silica dust in the workplace. Use adequate ventilation and dust collection systems.
- Testing can ensure engineering measures are sufficient. PPE is a solution until verification is established. Refer to Section 8 – Exposure Controls / Personal Protection for further information.
- Silica dust is not always visible in a form of a cloud. Use PPE.
- In accordance with OSHA's Hazard Communication Standard (29CFR 1910.12, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and / or local right to know laws and regulations, familiarize your employees with this SDS and the information contained herein.
- Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of PPE and engineering controls, which will reduce their risks of exposure.
- See ASTM International standard practice E1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."
- Store in a dry, cool place. Keep container tightly closed.

Section 8: Exposure Controls / Personal Protection

Control Parameters

Quartz (14808-60-7) – Occupational exposure limits (respirable fraction) in air for dust containing crystalline silica.		
USA ACGIH	ACGIH TWA (mg/m ³) (8 hour weighted average)	0.025 mg/m ³
USA IDLH	US IDLH (mg/m ³)	50 mg/m ³
USA NIOSH	NIOSH REL (TWA) (mg/m ³) (10 hour weighted average)	0.05 mg/m ³
USA MSHA/OSHA	MSHA/OSHA PEL (TWA) (mg/m ³) (8 hour weighted average) (Mineral Dust)	(30)/(%SiO ₂ + 2) mg/m ³ – total dust (10)/(% SiO ₂ + 2) mg/m ³ – respirable fraction

Occupational exposure limits in air for inert / nuisance dust.			
USA ACGIH	ACGIH TLV	3 mg/m ³	10mg/m ³
USA MSHA/OSHA	MSHA/OSHA PEL (As Inert or Nuisance Dust)	5 mg/m ³	15 mg/m ³

Exposure Controls

Engineering controls	Ensure adequate ventilation, especially in confined areas. Avoid dust production.
Personal protection equipment (PPE)	Use dust suits, protective goggles and respiratory protection in dusty areas. Self contained breathing apparatus is also a good option during dust production. Get training on the use of all PPE equipment. Respirator fit testing is mandatory. Contact NIOSH at 800.35.NIOSH, WWW.CDC.GOV/NIOSH
	Use impermeable gloves for hand protection.
	Use protective goggles for eye protection
	Use NIOSH approved respirators in areas containing airborne dust.
Hygiene	Always wash your hands after handling
Do not breathe dust. Use PPE. Research and engineer a solution for each application.	

California Inhalation Reference Exposure Limit (REL) as of 12/08: Crystalline silica (quartz, cristobalite, tridymite) is 3 ug/m ³ .
Canadian OEL:
<ul style="list-style-type: none"> • Canada Labour Code: 0.025 mg/m³ (respirable) • Alberta, British Columbia: 0.025 mg/m³ (respirable quartz and cristobalite) • Saskatchewan: 2 mg/m³ (respirable, amorphous: silica fume); 0.1 mg/m³ (respirable, amorphous: silica fused); 0.05 mg/m³ (respirable, cristobalite); 0.05 mg/m³ (respirable tridymite); 0.1 mg/m³ (respirable, quartz); 0.1 mg/m³ (respirable, tripoli) • Manitoba, Newfoundland, Prince Edward Island: 0.025 mg/m³ (respirable) • Ontario: 0.05 mg/m³ (respirable cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli); 0.1 mg/m³ (silica fused); 2 mg/m³ (silica fume) • Quebec: 0.05 mg/m³ (respirable, cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli) • New Brunswick: 0.1 mg/m³ (quartz); 0.05 mg/m³ (cristobalite) • Nova Scotia: 0.025 mg/m³ (quartz, cristobalite) • Yukon: 2 mg/m³ (respirable, amorphous); 300 particles/ml measured with a konimeter (quartz, and tripoli); 150 particles/ML measured with a konimeter (cristobalite and tridymite) • Northwest Territories, Nunavut: 2 mg/m³ (respirable, amorphous); 0.05 mg/m³ (respirable, cristobalite, tridymite, silica flour); 0.1 mg/m³ (respirable, fused silica, quartz, tripoli)
Austria OEL - Maximum concentration 0.15 mg/m ³
Japan OEL - Japan Society of Occupational Health Respirable crystalline silica 0.03 mg/m ³
Poland OEL TWA -2 mg/m ³ (total inhalable dust, containing >50% free crystalline silica);
<ul style="list-style-type: none"> • 0.3 mg/ mg/m³ m³ (respirable dust, containing >50% free crystalline silica); • 4.0 mg/m³ (total inhalable dust, containing 2% to 50% free crystalline silica); • 1.0 mg/m³ (respirable dust, containing 2% to 50% free crystalline silica)
United Kingdom OEL – 0.1 mg/m ³
Mexico – 0.1 mg/m ³ (quartz, inhalable)
<ul style="list-style-type: none"> • 0.05 mg/m³ (cristobalite, inhalable) • 0.05 mg/m³ (tridymite, inhalable) • 0.1 mg/m³ (tripoli containing respirable quartz powder, inhalable) • (Also refer to ACGIH)
Argentina – 0.05 mg/m ³ (quartz, respirable)
<ul style="list-style-type: none"> • 0.05 mg/m³ (cristobalite, respirable) • 0.05 mg/m³ (tridymite, respirable) • 0.1 mg/m³ (tripoli, respirable)

Section 9: Physical and chemical properties

Physical State / Appearance	Solid / Crystalline
Odor	None
Odor Threshold	No data available
Color	Natural
pH	No data available
Evaporation rate	No data available
Melting point	1710°C (3110°F)
Freezing point	No data available
Boiling point	2230°C (4046°F)
Flash point	No data available
Self ignition temperature	No data available

Decomposition temperature	No data available
Flammability (solid, gas)	Non-combustible solid
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	2.65 (approx.)
Solubility	Practically insoluble.
Log Pow	No data available
Log Kow	No data available
Viscosity	No data available
Explosive Limits	None known.
Oxidizing properties	None known.
Explosive limits	No data available

Section 10: Stability and Reactivity

Reactivity	None under normal conditions. Reactive with strong oxidizing agents.
Chemical / Thermal Stability	Chemically stable under normal temperature and pressure. Thermal instability occurs under high temperatures above 870°C (1598°F). It can change to crystalline silica such as tridymite and cristobalite.
Incompatible Materials	Avoid strong oxidizers such as fluorine, chlorine tri-fluoride, hydrogen fluoride, oxygen di-fluoride, hydrogen peroxide, acetylene, ammonia.
Hazardous Decomposition	Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetra-fluoride.
Hazardous Polymerization	Not know to polymerize.

Section 11: Toxicological Information

Acute toxicity	Not classified	
Aspiration hazard	Not classified	
Skin Irritation	Not classified	
Eye Irritation	Not classified	
Respiratory or skin sensitization	Not classified	
Reproductive toxicity	Not classified	
Specific target organ toxicity (single exposure)	Not classified	
Specific target organ toxicity (repeated exposure)	Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (inhalation)	
Germ cell mutagenicity	Not classified	
Carcinogenicity	May cause cancer - inhalation	
Quartz (14808-60-7)	IARC Group – Group 1	National Toxicity Program (NTP) Status: Known Human Carcinogen
Silica – All grades (14808-60-7)	Repeated or prolonged exposure to respirable crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal.	

Section 12: Ecological Information

Crystalline silica is not known to be eco-toxic, not readily biodegradable and not expected to bio-accumulate.

Section 13: Disposal Considerations

AS SOLD, our crystalline silica (quartz) products are not considered hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR 261 et seq. Dispose according to applicable local, state and federal regulations.

Section 14: Transport Information

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101, and Transportation of Dangerous Goods Regulations in the European Union, Canada, Argentina, Republic of Uzbekistan and Japan. Consult applicable international, national, state, provincial or local laws. In accordance with DOT / TDG / ADR / RID / ADN / IMDG / ACAA / IATA, crystalline silica is not a dangerous product in the sense of transport regulations.

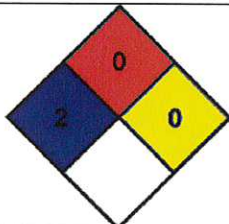
Section 15: Regulatory Information

US Federal Regulations	Silica / Quartz 14808-60-7	Immediate health hazard - acute Delayed health hazard – chronic.	On US TSCA (Toxic Substances Control Act) inventory listing.
Canada Regulations		WHMIS Classification. Class D Division 2 Subdivision A – Very toxic material causing other toxic effects.	
International Info		IARC (international Agency for Research on Cancer) listing.	NTP (National Toxicology Program) specifies as a carcinogen.
U State Regulations		See below.	
<p>U.S. - California - Proposition 65 - Carcinogens List . This product contains Quartz, a substance known to the state of California to cause cancer. U.S. - Hawaii - Occupational Exposure Limits - TWAs U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Occupational Exposure Limits - Mineral Dusts U.S. - Illinois - Toxic Air Contaminant Carcinogens U.S. - Maine - Chemicals of High Concern U.S. - Massachusetts - Right To Know List U.S. - Michigan - Occupational Exposure Limits - TWAs U.S. - Minnesota - Chemicals of High Concern U.S. - Minnesota - Hazardous Substance List U.S. - Minnesota - Permissible Exposure Limits - TWAs U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New Jersey - Special Health Hazards Substances List U.S. - Oregon - Permissible Exposure Limits - Mineral Dusts U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Tennessee - Occupational Exposure Limits - TWAs U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term U.S. - Vermont - Permissible Exposure Limits - TWAs U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs</p>			



Section 16 – Other Information

NFPA

Health Hazard	2 – intense or continued exposure could cause temporary or incapacitation or possible residual injury unless prompt medical attention is given	
Fire Hazard	0 – materials that will not burn	
Reactivity	0 – normally stable, even under fire exposure conditions, are not reactive with water	

HMIS III Rating

Health	2 - moderate hazard, temporary injury may occur
Flammability	0 – minimal hazard
Physical	0 – minimal hazard
Personal Protection	All equipment required plus engineering measures.

Definitions

Carc. 1A	Carcinogenicity Category 1A
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Holliston Sand company, Inc., assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users.

More information on the effects of crystalline silica exposure may be obtained from OSHA website: <http://www.osha.gov> or from NIOSH website: <http://www.cdc.gov/niosh>.

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1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Identity	Isoamyl Benzoate for Synthesis
Alternate Names	Isoamyl Benzoate for Synthesis

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use	Chemical for synthesis
Application Method	See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name	Thermco Products, Inc. 10 Millpond Drive, Unit #10 Lafayette, NJ 07848
---------------------	---

Emergency

Customer Service: Thermco Products, Inc.	973.300.9100
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2. Hazard identification of the product

2.1. Classification of the substance or mixture

Combustible Liquid;H227 Combustible Liquid.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.
H227 Combustible liquid.

[Prevention]:

P210 Keep away from heat / sparks / open flames / hot surfaces - No smoking.
P280 Wear protective gloves / eye protection / face protection.

[Response]:

No GHS response statements

[Storage]:

P403+235 Store in a well ventilated place. Keep cool.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

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3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
ISOPENTYL BENZOATE CAS Number: 0000094-46-2	100	Not classified	[1]

[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.
Eyes	Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.
Skin	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.
Ingestion	If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed

Overview	No specific symptom data available. See section 2 for further details.
-----------------	---

5. Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Do not use; water jet.

5.2. Special hazards arising from the substance or mixture

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

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Hazardous decomposition: No hazardous decomposition data available.

Keep away from heat / sparks / open flames / hot surfaces - No smoking.

5.3. Advice for fire-fighters

Special risks:

Combustible. Vapors heavier than air.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

Special protective equipment for fire fighting:

Do not stay in dangerous zone without self-contained breathing apparatus.

Do not allow run off water and contaminants from fire fighting to enter drains or water ways.

ERG Guide No. ----

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Do not inhale vapors/aerosols. Ensure supply of fresh air in enclosed rooms.

Take up with liquid-absorbent material (e.g. Chemizorb). Forward for disposal. Clean up affected area.

7. Handling and storage

7.1. Precautions for safe handling

Store in accordance with the National Fire Protection Association's publication NFPA 30, Flammable and Combustible Liquids Code. 29 CFR 1910.106 applies to the handling, storage, and use of flammable and combustible liquids.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Store in a cool dry area, away from heat, sparks and open flame. Keep containers sealed when not in use. Store out of direct sunlight.

Incompatible materials: Strong oxidizing agents

Tightly closed. At +15C to +25C.

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See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

No data available.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0000094-46-2	ISOPENTYL BENZOATE	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0000094-46-2	ISOPENTYL BENZOATE	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.

Eyes

Protective safety glasses required

Skin

Butyl rubber gloves
Layer thickness: 0.7 mm
Breakthrough time: >240 min

Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

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9. Physical and chemical properties

Appearance	Colorless Liquid
Odor	Almost Odorless
Odor threshold	Not Measured
pH	NA
Melting point / freezing point	NA
Initial boiling point and boiling range	260 C
Flash Point	89 C
Evaporation rate (Ether = 1)	NA
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: NA Upper Explosive Limit: NA
Vapor pressure (Pa)	NA
Vapor Density	NA
Density	0.99 g/cm ³ (@20C)
Solubility in Water	Insoluble
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	NA
Decomposition temperature	NA
Viscosity (cSt)	NA
VOC %	NA
Log Pow	4.15 (experimental) (Lit.)

9.2. Other information

No other relevant information.

10. Stability and reactivity

10.1. Reactivity

Hazardous Polymerization will not occur.

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Forms explosive mixtures with air on intense heating.

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10.5. Incompatible materials

Strong Oxidizing agents.

10.6. Hazardous decomposition products

No hazardous decomposition data available.

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
ISOPENTYL BENZOATE - (94-46-2)	6330.00, Rat - Category: NA	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

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12. Ecological information

12.1. Toxicity

Do not allow product to enter water, wastewater or soil! See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
ISOPENTYL BENZOATE - (94-46-2)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

An appreciable bioaccumulation potential is to be expected (log Po/w >3)

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	DOT Hazard Class: Not Applicable DOT Label: ---	IMDG: Not Applicable Sub Class: Not Applicable	Air Class: Not Applicable
14.4. Packing group	Not Applicable	Not Applicable	Not Applicable

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14.5. Environmental hazards

IMDG Marine Pollutant: No

14.6. Special precautions for user

No further information

15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification B3

US EPA Tier II Hazards

Fire: Yes

Sudden Release of Pressure: No

Reactive: No

Immediate (Acute): No

Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs:
(No Product Ingredients Listed)

EPCRA 302 Extremely Hazardous :
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:
(No Product Ingredients Listed)

Proposition 65 - Carcinogens (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):
(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):
(No Product Ingredients Listed)

N.J. RTK Substances (>1%) :
(No Product Ingredients Listed)

Penn RTK Substances (>1%) :
(No Product Ingredients Listed)

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16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is: not applicable

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

Disclaimer: This information provided on 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 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 Document