

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

## Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

- 1.1 Product Code:** 00147  
**Product Name:** Gingerbread Cookie Flavor  
**Trade Name:** Gingerbread Cookie Flavor
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
- 1.3 Details of the Supplier of the Safety Data Sheet:**  
**Company Name:** Perfumer's Apprentice  
170 Technology Circle  
Scotts Valley, CA 95066
- 1.4 Emergency telephone number:**

## Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**  
**Acute Toxicity: Oral, Category 4**  
**Acute Toxicity: Inhalation, Category 4**  
**Flammable Liquids, Category 4**  
**Skin Corrosion/Irritation, Category 1B**
- 2.1.2 Classification according to Directive 1999/45/EC:**  
**Xn: Harmful**  
**C: Corrosive**  
**Ha**  
**rm**  
**fu**  
**I**  
**Risk Phrases: R20/22, R36/37/38, R34, R10**  
**For full text of R- phrases: see SECTION 15.**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



**GHS Signal Word:** **Danger**

**GHS Hazard Phrases:**

H302 - Harmful if swallowed.  
H332 - Harmful if inhaled.  
H227 - Combustible liquid.  
H314 - Causes severe skin burns and eye damage.

**GHS Precaution Phrases:**

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.  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

**GHS Response Phrases:**

P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 - Rinse mouth.  
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 - Call a POISON CENTER/doctor/... if you feel unwell.  
P370+378 - In case of fire, use ... to extinguish.  
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
P363 - Wash contaminated clothing before reuse.  
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P310 - Immediately call a POISON CENTER/doctor/....  
P321 - Specific treatment see ... on this label.

**GHS Storage and Disposal Phrases:**

P501 - Dispose of contents/container to ....  
P403+235 - Store in cool/well-ventilated place.  
P405 - Store locked up.

**2.2.2 Labeling according to Directive 1999/45/EC:**



Xn



C

Ha

rm

fu

I

**2.3 Adverse Human Health** Adverse reproductive effects have been reported in animals.

**Effects and Symptoms:**

Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated contact may result in "vanillism", an allergic dermatitis. Doesn't seem likely upon a closer look since the allergic reaction is caused by a mite in the 'raw' vanilla.

Chronic ingestion may cause lactic acidosis and possible seizures.

Chronic: Exposure to large doses may cause central nervous system depression. Exposures to propylene glycol having no adverse effects on the mother should have no effect on the fetus. Birth defects are unlikely. In animal studies, propylene glycol has been shown not to interfere with reproduction. Effects may be delayed.

**2.3.1 Inhalation:**

Low hazard for normal industrial handling. Inhalation of a mist of this material may cause respiratory tract irritation. Material has a low vapor pressure at room temperature, so exposure to vapor is not likely. Causes respiratory tract irritation. Material has a very low vapor pressure at room temperature, so inhalation exposures are not expected unless material is heated or misted. May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract. No hazard expected in normal industrial use. Dust is irritating to the respiratory tract. Causes chemical burns to the respiratory tract. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May cause burning sensation in the chest. Can produce delayed pulmonary edema. Skin: May be harmful if absorbed through skin. May cause skin irritation.

**2.3.2 Skin Contact:**

May be absorbed through damaged or abraded skin in harmful amounts. Allergic reactions have been reported. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts. Repeated exposures may cause problems. Negative results have consistently been obtained in guinea pigs studies for sensitization. 1,,2-Propylene glycol is not considered an occupational skin sensitizer. (CHEMINFO) Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Causes redness and pain. Contact with the skin may cause a local anesthetic

effect. Material is a weak skin sensitizer. In an acute dermal irritation study in rats, two of six animals exhibited liver damage. Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin. Dust may cause mechanical irritation. Low hazard for normal industrial handling. Harmful if absorbed through the skin. Causes skin burns. May cause irritation and dermatitis. May cause cyanosis of the extremities.

**2.3.3 Eye Contact:**

May cause slight transient injury. Causes severe eye irritation. Causes redness and pain. Dust may cause mechanical irritation. Low hazard for normal industrial handling. Causes eye burns. May cause chemical conjunctivitis and corneal damage.

**2.3.4 Ingestion:**

Low hazard for usual industrial handling. May cause hemoglobinuric nephrosis. May cause changes in surface EEG. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. Ingestion of large amounts may cause central nervous system depression. Harmful if swallowed.

Vapor or mist is irritating to the eyes, mucous membranes, and upper respiratory tract. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.

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

CAS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	Risk Phrases/ GHS Classification
57-55-6	Propylene glycol	>=10.0 %	200-338-0 NA	No phrases apply.
100-51-6	Benzenemethanol	>=10.0 %	202-859-9 603-057-00-5	Xn; R20/22 Acute Tox.(O) 4: H302 Acute Tox.(I) 4: H332
121-32-4	Benzaldehyde, 3-ethoxy-4-hydroxy-	>=10.0 %	204-464-7 NA	Xn; R22
4940-11-8	2 - Ethyl - 3 - hydroxy - 4 - pyrone	1.0 -10.0 %	225-582-5 NA	Xn; R22
121-33-5	Benzaldehyde, 4-Hydroxy-3-methoxy-	1.0 -10.0 %	204-465-2 NA	No phrases apply.
8007-08-7	Oils, ginger	1.0 -10.0 %	NA NA	No phrases apply. Asp. Toxic. 1: H304 Skin Sens. 1: H317 Aquatic (C) 2: H411

## Section 4. First Aid Measures

### 4.1 Description of First Aid Measures:

**In Case of Inhalation:** If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical aid. Remove from exposure and move to fresh air immediately. Get medical aid if cough or other symptoms appear. If breathed in, move person into fresh air. Consult a physician. Get medical aid immediately. 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:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. In case of skin contact, flush with copious amounts of water for at least 15 minutes. Call a physician. Get medical aid if irritation develops or persists. Wash off with soap and plenty of water. Consult a physician. Get medical aid immediately. Destroy contaminated shoes.

**In Case of Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician. Flush eyes with water as a precaution. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes). Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**In Case of Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. If victim is conscious and alert, give 2-4 cupfuls of milk or water. If swallowed, wash out mouth with water provided person is conscious. Call a physician. Treat symptomatically and supportively. Get medical aid if irritation or symptoms occur. Rinse mouth with water. Consult a physician. Get medical aid immediately. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

### 4.2 Important Symptoms and Effects, Both Acute and Delayed:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Central nervous system depression, Prolonged or repeated exposure to skin causes defatting and dermatitis.

**Note for the Doctor:** Persons with impaired kidney function may be more susceptible to the effects of this substance. Treat symptomatically and supportively. Blood benzyl alcohol and benzoic acid and urine hippuric acid may be helpful in diagnosis. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## Section 5. Fire Fighting Measures

### 5.1 Suitable Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Use dry chemical, carbon dioxide, or alcohol-resistant foam. Water spray may cause frothing. Suitable: Water spray. In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Use water spray to cool fire-exposed containers. 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. Water may be ineffective. Do NOT use straight streams of water. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

### 5.2 Flammable Properties

**and Hazards:**

**Flash Pt:**

**Explosive Limits:**

LEL:

UEL:

**Autoignition Pt:**

**5.3 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. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Dust from this material can form explosive organic dust cloud. Wear self contained breathing apparatus for fire fighting if necessary. Use water spray to keep fire-exposed containers cool. Containers may explode when heated. 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. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire. Flammable liquid and vapor. They can spread along the ground and collect in low or confined areas. Further information. Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air.

**Section 6. Accidental Release Measures**

**6.3 Methods and Material For Containment and Cleaning Up:**

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. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Remove all sources of ignition. **PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Evacuate area. PROCEDURE(S) OF PERSONAL PRECAUTION(S)**

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for cleaning up.

Absorb on sand or vermiculite and place in closed containers for disposal. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Avoid generating dusty conditions. Personal precautions.

Avoid breathing vapors, mist or gas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Use water spray to dilute spill to a non-flammable mixture. Avoid runoff into storm sewers and ditches which lead to waterways. Use water spray to disperse the gas/vapor. Use a spark-proof tool. Absorb spill with an alkaline material such as soda ash or lime. Carefully scoop up and place into appropriate disposal container. A vapor suppressing foam may be used to reduce vapors. Do not use combustible materials such as sawdust. Use personal protective equipment. Ensure adequate ventilation.

Soak up with inert absorbent material and dispose of as hazardous waste.

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Keep away from heat and flame. Avoid breathing dust, mist, or vapor. User Exposure: Do not breathe vapor. Do not breathe dust. Minimize dust generation and accumulation. Avoid breathing dust. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Use only in a well-ventilated area. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale. Discard contaminated shoes. Use spark-proof tools and explosion proof equipment. Wash clothing before reuse.
- 7.2 Precautions To Be Taken in Storing:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Keep away from sources of ignition. Suitable: Keep tightly closed. SPECIAL REQUIREMENTS: Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat and flame. Do not store in direct sunlight. Keep container closed when not in use. Keep from contact with oxidizing materials. Refrigerator/flammables. Store in cool place. Store under nitrogen.

### Section 8. Exposure Controls/Personal Protection

**8.1 Exposure Parameters:**

CAS #	Partial Chemical Name	Britain EH40	France VL	Europe
57-55-6	Propylene glycol	TWA: 474 mg/m3 (150 ppm) (Total Particulates) TWA: 10 mg/m3 (Powder)		
100-51-6	Benzenemethanol			
121-32-4	Benzaldehyde, 3-ethoxy-4-hydroxy-			
4940-11-8	2 - Ethyl - 3 - hydroxy - 4 - pyrone			
121-33-5	Benzaldehyde, 4-Hydroxy-3-methoxy-			
8007-08-7	Oils, ginger			
CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
57-55-6	Propylene glycol			
100-51-6	Benzenemethanol			
121-32-4	Benzaldehyde, 3-ethoxy-4-hydroxy-			
4940-11-8	2 - Ethyl - 3 - hydroxy - 4 - pyrone			
121-33-5	Benzaldehyde, 4-Hydroxy-3-methoxy-			
8007-08-7	Oils, ginger			

**8.2 Exposure Controls:**

**8.2.1 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. Safety shower and eye bath. Mechanical exhaust required. Local exhaust may be necessary to control concentrations to acceptable levels. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

**8.2.2 Personal protection equipment:**

**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. Wear chemical splash goggles. Chemical safety goggles. Safety glasses with side-shields conforming to EN166. Safety glasses.

**Protective Gloves:** Wear appropriate protective gloves to prevent skin exposure. Hand: Compatible chemical-resistant gloves. 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

**Other Protective Clothing:** Wear appropriate protective clothing to prevent skin exposure. Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**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 respirator use. 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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

**Work/Hygienic/Maintenance Practices:** Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Section 9. Physical and Chemical Properties**

**9.1 Information on Basic Physical and Chemical Properties**

**Physical States:** [ ] Gas [X] Liquid [ ] Solid

**Appearance and Odor:** Transparent Colorless.  
Gingerbread taste and aroma.

**Melting Point:**

**Boiling Point:**

**Flash Pt:**

**Evaporation Rate:**

**Explosive Limits:** LEL: UEL:

**Vapor Pressure (vs. Air or mm Hg):**

**Vapor Density (vs. Air = 1):**

	<b>Specific Gravity (Water = 1):</b>
	<b>Solubility in Water:</b>
	<b>Autoignition Pt:</b>
<b>9.2</b>	<b>Other Information</b>
	<b>Percent Volatile:</b>

**Section 10. Stability and Reactivity**

<b>10.1</b>	<b>Reactivity:</b>	
<b>10.2</b>	<b>Stability:</b>	Unstable [ <input type="checkbox"/> ]    Stable [ <input checked="" type="checkbox"/> ]
<b>10.3</b>	<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.
	<b>Possibility of Hazardous Reactions:</b>	Will occur [ <input type="checkbox"/> ]    Will not occur [ <input checked="" type="checkbox"/> ]
<b>10.4</b>	<b>Conditions To Avoid - Instability:</b>	Excess heat, moist air, ignition sources, Light, dust generation, Moisture, Heat, flames and sparks. Incompatible materials, alkaline materials. Air Exposure to moisture.
<b>10.5</b>	<b>Incompatibility - Materials To Avoid:</b>	Strong oxidizing agents, Strong acids, hydrogen bromide gas, iron at 100C(exothermic polymerization), Corrosive to iron, Steel, Strong oxidizing agents. Ammonia, Sulfuric acid, isocyanates, epichlorohydrin, aliphatic amines, caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), Strong reducing agents, Alkali metals, Aluminum, iron, phenols, Oxygen.
<b>10.6</b>	<b>Hazardous Decomposition Or Byproducts:</b>	Carbon monoxide, Carbon dioxide, irritating and toxic fumes and gases, Carbon dioxide (CO2), Hazardous decomposition products formed under fire conditions.  Carbon oxides.

**Section 11. Toxicological Information**

<b>11.1</b>	<b>Information on Toxicological Effects:</b>	Epidemiology: No data available. Teratogenicity: No data available. Reproductive Effects: Mutagenicity: Experimental mutagen in human lymphocyte cells. Neurotoxicity: Other Studies: No information found. Teratogenicity: No information available. Adverse reproductive effects have occurred in experimental animals.
	<b>Irritation or Corrosion:</b>	Skin - rabbit -
	<b>Carcinogenicity/Other Information:</b>	CAS# 57-55-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 100-51-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 121-33-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. 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. CAS# 107-92-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 513-86-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 706-14-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
	<b>Carcinogenicity:</b>	NTP? No    IARC Monographs? No    OSHA Regulated? No



### Section 12. Ecological Information

<b>12.1 Toxicity:</b>	<p>Ecotoxicity: Water flea Daphnia: EC50 10000 mg/L; 48 HrUnspecified, Bacteria: Phytobacterium phosphoreum: EC50 = 710 mg/L; 30 min; Microtox testFish: Goldfish: LC50 5000 mg/L; 24 Hr; UnspecifiedFish: Guppy: LC50 1000 mg/L; 48 Hr; Unspecified If released to water, 1,2-propanediol is expected to degrade relatively rapidly via biodegradation. If released to soil, relatively rapid biodegradation should also occur. Significant leaching in soil can be predicted.</p> <p>Environmental: If released to the atmosphere, it is degraded rapidly by reaction with photochemically produced hydroxyl radicals (typical half-life of 32 hr). Physical removal from air by rainfall is possible.</p> <p>Physical: No information available.</p> <p>Other: No information available. If released to soil, benzyl alcohol is expected to display high mobility and readily leach through soil. Volatilization from dry soil to the atmosphere may be an important fate process; however, it is not expected to be an important process in moist soils. If released to water, benzyl alcohol is expected to undergo microbial degradation under aerobic and anaerobic conditions.</p> <p>Physical: In the atmosphere, benzyl alcohol is expected to exist almost entirely in the vapor phase. The estimated half-life for the vapor phase reaction of benzyl alcohol with photochemically produced hydroxyl radicals is 2 days.</p> <p>If released to soil, butyric acid is expected to be relatively mobile, although adsorption may occur by attractive interactions with active sites in the soil. Butyric acid is not expected to significantly volatilize from either moist or dry soil to the atmosphere. If released to water, butyric acid will exist predominately in the dissociated form under environmental conditions. Butyric acid is expected to biodegrade rapidly under both aerobic and anaerobic conditions.</p> <p>Physical: BOD: 1.150 lb/lb, 5 days; 1.450 lb/lb, 20 days.</p>
<b>12.2 Persistence and Degradability:</b>	No data available.
<b>12.3 Bioaccumulative Potential:</b>	No data available.
<b>12.4 Mobility in Soil:</b>	No data available.

### Section 13. Disposal Considerations

<b>13.1 Waste Disposal Method:</b>	<p>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.</p> <p>RCRA P-Series: None listed.</p> <p>RCRA U-Series: None listed. APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Product.</p> <p>This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.</p> <p>Contaminated packaging.</p> <p>Dispose of as unused product. Observe all federal, state, and local environmental regulations.</p>
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## Section 14. Transport Information

### 14.1 LAND TRANSPORT (US DOT):

**DOT Proper Shipping Name:** Toxic by inhalation liquid, water-reactive, flammable, n.o.s. with an LC50 lower or equal to 1000 ml/m<sup>3</sup> and saturated vapor concentration greater than or equal to 10 LC50.

**DOT Hazard Class:** 6.1 POISON

**UN/NA Number:** UN3491 **Packing Group:** I

### 14.1 LAND TRANSPORT (Canadian TDG):

**TDG Shipping Name:** Not Regulated. No information available. ISOBUTYRIC ACID.

### 14.1 LAND TRANSPORT (European ADR/RID):

**ADR/RID Shipping Name:**

**UN Number:** 3491 **Packing Group:** I

**Hazard Class:** 6.1 - POISON

### 14.3 AIR TRANSPORT (ICAO/IATA):

**ICAO/IATA Shipping Name:** Forbidden.

## Section 15. Regulatory Information

### European Community Hazard Symbol codes:

### European Community Risk and Safety Phrases:

R20/22	Harmful by inhalation and if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.
R34	Causes burns.
R10	Flammable.
S24/25	Avoid contact with skin and eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S22	Do not breathe dust.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)
S16	Keep away from sources of ignition.
S33	Take precautionary measures against static discharges.
S37	Wear suitable gloves.
S9	Keep container in a well-ventilated place.
S28A	After contact with skin, wash immediately with plenty of water.

## Section 16. Other Information

**Revision Date:** 03/28/2014

**Additional Information About This Product:**