

Allantoin

5004942

Version 1.0

Revision Date 08/05/2010

Print Date 06/19/2013

*Conf*  
*Nov 13/13***SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Allantoin  
Product Use Description : Ingredient for pharmaceutical products  
Ingredient for personal care products

Company : DSM Nutritional Products  
45 Waterview Blvd  
Parsippany NJ 07054-1298

Telephone : (908) 475-7373  
Telefax : (908) 475-7406  
Emergency telephone : Emergency # 1-800-424-9300 (24 HR CHEMTREC)

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

Form: crystalline, powder, Colour: white - off-white, Odour: odourless

OSHA Hazards : NO OSHA HAZARDS

**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.

**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.

**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.

**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.

**Additional hazards and advice**

Risk of dust explosion.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Brief description of the product : Active ingredient  
Molecular formula : C<sub>4</sub>H<sub>6</sub>N<sub>4</sub>O<sub>3</sub>

**Hazardous components**

No ingredients are hazardous according to HCS criteria.

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**SECTION 4. FIRST AID MEASURES****First aid procedures**

- General advice : No hazards which require special first aid measures.
- Inhalation : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.  
If symptoms persist, call a physician.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with soap and plenty of water.
- Eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.
- Ingestion : Rinse mouth with water and drink plenty of water afterwards.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.

**SECTION 5. FIRE-FIGHTING MEASURES****Flammable properties**

- Flash point : not applicable

**Fire fighting**

- Suitable extinguishing media : Water  
Foam
- Further information : Consider dust explosion hazard.

**Protective equipment and precautions for firefighters**

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

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions : Avoid dust formation.
- Environmental precautions : No special environmental precautions required.
- Methods for containment /  
Methods for cleaning up : Sweep up and shovel.

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**SECTION 7. HANDLING AND STORAGE****Handling**

- Handling : For personal protection see section 8.  
No special handling advice required.
- Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.  
Take precautionary measures against static discharges.

**Storage**

- Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place.  
  
Keep away from direct sunlight.
- Advice on common storage : No special restrictions on storage with other products.
- Storage temperature :  $\leq 77\text{ }^{\circ}\text{F}$  ( $\leq 25\text{ }^{\circ}\text{C}$ )
- Other data : No decomposition if stored and applied as directed.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

Contains no substances with occupational exposure limit values.

**Engineering measures**

For technical measures see section 7.

**Personal protective equipment**

- Eye protection : Safety glasses
- Hand protection : For prolonged or repeated contact use protective gloves.  
for example nitrile rubber
- Skin and body protection : Protective suit
- Respiratory protection : No personal respiratory protective equipment normally required.
- Hygiene measures : General industrial hygiene practice.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form : crystalline, powder

Colour : white - off-white

Odour : odourless

**Safety data**

Flash point : not applicable

Molecular Weight : 158.12 g/mol

pH : 4.0 - 6.0 (5 g/l, 20 °C)

Melting point/range : 225 - 236 °C

Vapour pressure : &lt; 0.001 hPa (at 25 °C; calculated (citation from literature))

Density : ca. 1.7 g/cm<sup>3</sup> (at 20 °C)

Water solubility : 5.7 g/l (25 °C)

40 g/l (75 °C)

Partition coefficient: n-  
octanol/water : -3.14 (calculated (citation from literature))Solubility in other solvents : Ethanol: 2 g/l  
Diethylether: insoluble**SECTION 10. STABILITY AND REACTIVITY**

Conditions to avoid : no data available

Thermal decomposition : no data available

Hazardous reactions : Dust may form explosive mixture in air.

: No decomposition if used as directed.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity : LD50 (rat): &gt; 5,000 mg/kg

Skin irritation : No skin irritation

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Eye irritation : No eye irritation (rabbit)

Sensitisation : No known indication for sensitizing effect.

Genotoxicity in vitro : not mutagenic (Ames test)

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity effects**

Toxicity to fish : Danio rerio (zebra fish)  
LC50 > 5,000 mg/l  
(OECD Test Guideline 203)

Toxicity to bacteria : Pseudomonas putida  
EC0 > 10,000 mg/l

**Elimination information (persistence and degradability)**

Biodegradability : Well inherently biodegradable.  
> 80 % (28 d)  
(OECD Test Guideline 302B)

: > 70 %Biodegradable.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Further information : Offer surplus and non-recyclable solutions to a licensed disposal company.

User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.

Contaminated packaging : Empty remaining contents.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

**SECTION 14. TRANSPORT INFORMATION**

**IATA**  
Not dangerous goods

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**IMDG**

Not dangerous goods

**RID**

Not dangerous goods

Not classified as dangerous in the meaning of transport regulations.

**SECTION 15. REGULATORY INFORMATION**

**OSHA Hazards** : No OSHA Hazards  
**SARA 311/312 Hazards** : No SARA Hazards

**EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW**

**SARA 302 Reportable Quantity** : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.  
**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

**Ozone-Depletion Potential** : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

**Pennsylvania Right To Know Components** : allantoin 97-59-6

**New Jersey Right To Know Components** : allantoin 97-59-6

**The components of this product are reported in the following inventories:**

**TSCA** On TSCA Inventory

**DSL** All components of this product are on the Canadian DSL list.

**SECTION 16. OTHER INFORMATION****Further information**

**HMIS Classification** : Health hazard: 0  
 Flammability: 0  
 Physical hazards: 0

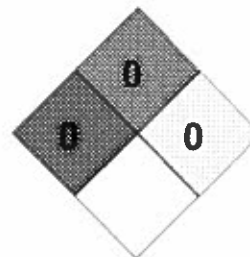
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**NFPA Classification** : Health hazard: 0  
Fire Hazard: 0  
Reactivity Hazard: 0



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

E-mail address : [sds.nutritionalproducts@dsm.com](mailto:sds.nutritionalproducts@dsm.com)  
Responsible/issuing person

**Definitions:** ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CPR = Controlled Products Regulations. DSL = Canadian Domestic Substance List. DOT = Department of Transportation. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HCS = Hazardous Communication Standard. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IMDG = International Maritime Dangerous Good. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.

## Material Safety Data Sheet

Version 5.0  
Revision Date 03/01/2013  
Print Date 11/13/2013

*Nov 13/13*

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Anise oil

Product Number : W209406  
Brand : Aldrich  
Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.  
2149 Winston Park Drive  
OAKVILLE ON L6H 6J8  
CANADA

Manufacturer : Sigma-Aldrich Corporation  
3050 Spruce St.  
St. Louis, Missouri 63103  
USA

Telephone : +1 9058299500  
Fax : +1 9058299292  
Emergency Phone # (For both supplier and manufacturer) : 1-800-424-9300

Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### WHMIS Classification

B3 Combustible Liquid  
D2B Toxic Material Causing Other Toxic Effects

Combustible Liquid  
Skin sensitiser

#### GHS Classification

Flammable liquids (Category 4)  
Acute toxicity, Oral (Category 5)  
Skin sensitisation (Category 1)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)

H227 Combustible liquid  
H303 May be harmful if swallowed.  
H317 May cause an allergic skin reaction.

Precautionary statement(s)

P280 Wear protective gloves.

#### HMIS Classification

Health hazard: 2  
Flammability: 2  
Physical hazards: 0

#### Potential Health Effects

Inhalation : May be harmful if inhaled. May cause respiratory tract irritation.  
Skin : May be harmful if absorbed through skin. May cause skin irritation.



**Eyes**  
**Ingestion**

May cause eye irritation.  
May be harmful if swallowed.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Anise seed oil  
Illicium Verum Hook

CAS-No.	EC-No.	Index-No.	Concentration
<b>Anise oil</b>			
8007-70-3	-	-	-

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### 4. FIRST AID MEASURES

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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### 5. FIREFIGHTING MEASURES

**Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

**Suitable extinguishing media**

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.

**Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products**

no data available **Explosion data - sensitivity to mechanical impact**

no data available

**Explosion data - sensitivity to static discharge**

no data available

**Further information**

Use water spray to cool unopened containers.

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### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. 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.

**Methods and materials for containment and cleaning up**

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.

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**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**Personal protective equipment****Respiratory protection**

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Full contact**

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

**Splash contact**

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 30 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	liquid
Colour	no data available

### Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	232 °C (450 °F) - lit.
Flash point	93 °C (199 °F) - closed cup
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	0.98 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

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## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

no data available

### Hazardous decomposition products

no data available

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## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 2,250 mg/kg

#### Inhalation LC50

no data available

#### Dermal LD50

LD50 Dermal - rabbit - > 5,000 mg/kg

**Other information on acute toxicity**  
no data available

**Skin corrosion/irritation**  
no data available

**Serious eye damage/eye irritation**  
no data available

**Respiratory or skin sensitisation**  
May cause allergic skin reaction.

**Germ cell mutagenicity**

Genotoxicity in vitro - rat - S. typhimurium  
Host-mediated assay

Genotoxicity in vitro - S. typhimurium  
Mutation in microorganisms

**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.

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**  
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**  
no data available

**Aspiration hazard**  
no data available

**Potential health effects**

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

**Synergistic effects**  
no data available

**Additional Information**  
RTECS: BZ4200000

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## 12. ECOLOGICAL INFORMATION

**Toxicity**

no data available

**Persistence and degradability**  
no data available

**Bioaccumulative potential**  
no data available

**Mobility in soil**  
no data available

**PBT and vPvB assessment**  
no data available

**Other adverse effects**  
no data available

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### 13. DISPOSAL CONSIDERATIONS

**Product**

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.

**Contaminated packaging**

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

**DOT (US)**

NA-Number: 1993 Class: CBL Packing group: III

Proper shipping name: Combustible liquid, n.o.s. (Anise oil)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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### 15. REGULATORY INFORMATION

**WHMIS Classification**

B3

Combustible Liquid

Combustible Liquid

D2B

Toxic Material Causing Other Toxic Effects

Skin sensitiser

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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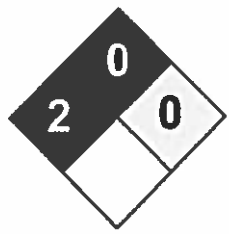
### 16. OTHER INFORMATION

**Text of H-code(s) and R-phrases mentioned in Section 3**

**Further information**

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Nov 19/13 *cut*



Health	2
Fire	0
Reactivity	0
Personal Protection	E

## Material Safety Data Sheet Bentonite MSDS

### Section 1: Chemical Product and Company Identification

<b>Product Name:</b> Bentonite	<b>Contact Information:</b>
<b>Catalog Codes:</b> SLB1441, SLB2935, SLB4435	Sciencelab.com, Inc. 14025 Smith Rd. Houston, Texas 77396
<b>CAS#:</b> 1302-78-9	US Sales: 1-800-901-7247 International Sales: 1-281-441-4400
<b>RTECS:</b> CT9450000	Order Online: ScienceLab.com
<b>TSCA:</b> TSCA 8(b) inventory: Bentonite	<b>CHEMTREC (24HR Emergency Telephone), call:</b> 1-800-424-9300
<b>CI#:</b> Not applicable.	<b>International CHEMTREC, call:</b> 1-703-527-3887
<b>Synonym:</b> Montmorillonite;	<b>For non-emergency assistance, call:</b> 1-281-441-4400
<b>Chemical Name:</b> Not available.	
<b>Chemical Formula:</b> (Al,Fe <sub>1.67</sub> Mg <sub>0.33</sub> )Si <sub>10</sub> (OH) <sub>2</sub> Na <sup>(+)</sup> Ca <sup>(++)</sup> /2.33	

### Section 2: Composition and Information on Ingredients

<b>Composition:</b>		
<b>Name</b>	<b>CAS #</b>	<b>% by Weight</b>
Bentonite	1302-78-9	100
<b>Toxicological Data on Ingredients:</b> Bentonite LD50: Not available. LC50: Not available.		

### Section 3: Hazards Identification

**Potential Acute Health Effects:**  
Hazardous in case of eye contact (irritant), of inhalation. Slightly hazardous in case of skin contact (irritant), of ingestion.

**Potential Chronic Health Effects:**  
Hazardous in case of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage.

### Section 4: First Aid Measures

**Eye Contact:**  
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

**Skin Contact:** Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

**Serious Skin Contact:** Not available.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Serious Inhalation:** Not available.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### Section 7: Handling and Storage

**Precautions:**

Do not breathe the dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:**

TWA: 10 from ACGIH (TLV) [United States] Consult local authorities for acceptable exposure limits.

### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid.

**Odor:** Odorless.

**Taste:** Not available.

**Molecular Weight:** Not available.

**Color:** Beige. (Light.)

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** Decomposes.

**Critical Temperature:** Not available.

**Specific Gravity:** 2.5 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:**

Very slightly soluble in cold water, hot water. Insoluble in methanol, diethyl ether, n-octanol, acetone.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.



**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

### Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:** Causes damage to the following organs: lungs.

**Other Toxic Effects on Humans:**

Hazardous in case of inhalation. Slightly hazardous in case of skin contact (irritant), of ingestion.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are as toxic as the original product.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

### Section 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory: Bentonite

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada): CLASS D-2A: Material causing other toxic effects (VERY TOXIC).**

**DSCL (EEC): R36- Irritating to eyes.**

**HMIS (U.S.A.):**

**Health Hazard: 2**

**Fire Hazard: 0**

**Reactivity: 0**

**Personal Protection: E**

**National Fire Protection Association (U.S.A.):**

**Health: 2**

**Flammability: 0**

**Reactivity: 0**

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

### Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/10/2005 08:14 PM

**Last Updated:** 05/21/2013 12:00 PM

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall ScienceLab.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if ScienceLab.com has been advised of the possibility of such damages.*



# MATERIAL SAFETY DATA SHEET

*Cup Nov 13/13*  
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CODE # 4033

## SECTION I PRODUCT INFORMATION

**PRODUCT IDENTIFIER** : CALAMINE USP POWDER  
**CHEMICAL NAME AND SYNONYMS** : Calamine, zinc oxide, zinc monoxide  
**IDENTIFICATION NUMBER** : Not regulated  
**PRODUCT USE** : Astringent and skin protection

**SUPPLIER** : B.G.R. Chemical Products Inc.  
**ADDRESS** : 600 Delmar Avenue  
 Pointe-Claire, QC  
 H9R 4A8  
**TELEPHONE** : (514) 694-7442

**EMERGENCY:** Newalta Industrial Services Inc.  
**24H NUMBER :** 1-800-567-7455

## SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CONC.	CAS NUMBER	LD50(rat-oral)	LC50(rat-ihl)
Zinc oxide	98 - 100%	1314-13-2	7950 mg/kg (mouse)	2500mg/m <sup>3</sup> /4h (mouse)
Ferric oxide	0,1 - 1%	1309-37-1	Not available	Not available

## SECTION III WHMIS CLASSIFICATION



CLASS D2B

## SECTION IV PHYSICAL DATA

PHYSICAL STATE	Solid	pH (water=7)	6.9 - 7.4
ODOUR AND APPEARANCE	Pink odourless powder	SPECIFIC GRAVITY (water=1)	5.6
ODOUR THRESHOLD	Not applicable	VAPOUR DENSITY	Not applicable
BOILING POINT	Sublimes	VAPOUR PRESSURE	Not applicable
MELTING POINT	1975°C	EVAPORATION RATE	Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION	Not applicable		

## SECTION V FIRE OR EXPLOSION

**CONDITION OF FLAMMABILITY:** Not flammable

**MEANS OF EXTINCTION:** Use extinguish media appropriate for surrounding materials.

FLASH POINT	Not available	AUTO-IGNITION TEMPERATURE	Not available
UPPER FLAMMABLE LIMIT	Not available	MECHANICAL IMPACT SENSITIVITY	Not available
LOWER FLAMMABLE LIMIT	Not available	STATIC DISCHARGE SENSITIVITY	Not available

**HAZARDOUS COMBUSTION PRODUCTS:** At very high temperatures can emit toxic zinc fumes.



# MATERIAL SAFETY DATA SHEET

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## SECTION VI REACTIVITY DATA

**CHEMICAL INSTABILITY CONDITIONS:** Stable under normal storage conditions.

**INCOMPATIBLE SUBSTANCES AND CONDITIONS OF REACTIVITY:** Can react violently when mixed with chlorinated rubber, magnesium, linseed oil, strong bases, strong acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** At very high temperatures can emit toxic zinc fumes.

## SECTION VII TOXICOLOGICAL PROPERTIES

**SKIN CONTACT/ABSORPTION:** No skin irritation..

**EYE CONTACT:** May cause irritation and redness due to abrasive action.

**INHALATION:** Inhalation of freshly formed zinc oxide fumes may cause a flu like illness called metal fume fever. **Zinc oxides fumes appear only upon the formation of zinc oxide from zinc metal.** Symptoms occurs 4 to 12 hours after exposure. Severe over exposure may result in bronchitis or pneumonia with a blueish tint to the skin.

**INGESTION:** Ingestion of large amounts can cause vomiting and gastro-enteritis. The toxic dose is 2 g/kg and over

**ACUTE/CHRONIC EXPOSURE EFFECTS:** Repeated or prolonged exposure to zinc oxide fumes may cause conjunctivitis.

<b>EXPOSURE LIMIT</b>	10 mg/m <sup>3</sup> (dusts)	<b>SHORT TERM EXPOSURE LIMIT</b>	Not available
<b>CARCINOGENICITY</b>	Not available	<b>SENSITIZATION TO PRODUCT</b>	Not available
<b>TERATOGENICITY</b>	Not available	<b>MUTAGENICITY</b>	Not available
<b>SYNERGISTIC PRODUCTS</b>	Not available	<b>REPRODUCTIVE TOXICITY</b>	Not available
<b>IRRITANCY OF PRODUCT</b>	Slight (eyes)		

## SECTION VIII PREVENTIVE MEASURES

**PROTECTIVE GLOVES:** Recommended.

**EYE PROTECTION:** Wear chemical safety goggles. Do not wear contact lenses.

**RESPIRATORY PROTECTION:** Use a NIOSH approved respirator if there is a risk of over exposure.

**OTHER PROTECTIVE EQUIPMENT:** Use appropriate protective clothing to avoid skin contact. Provide eye bath and security shower facilities nearby.

**ENGINEERING CONTROLS:** Use local exhaust ventilation.

**PROCEDURES TO BE FOLLOWED IN CASE OF SPILL OR LEAK:** Use appropriate respiratory protection. Avoid dust dispersal. Sweep up and place in a waste container.

**WASTE DISPOSAL:** Dispose of waste in accordance to Federal, provincial and Municipal regulations.

**HANDLING AND STORAGE PROCEDURES:** Store tightly closed containers in a cool, dry and well-ventilated area. Avoid dust dispersal.

### SPECIAL SHIPPING INFORMATION:

Shipping Name: CALAMINE

Class/Division : Not regulated



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SECTION IX FIRST AID MEASURES

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**SKIN:** Wash affected skin with soap and water. Get medical advice if irritation develops.

**EYES:** Wash thoroughly with running water for at least 15 minutes. Get medical advice if irritation develops.

**INHALATION:** Remove victim to fresh air. Get medical attention for any breathing difficulty.

**INGESTION:** Give several glasses of water to dilute material. If large amounts have been swallowed, get prompt medical attention. Never give anything by mouth to an unconscious or convulsing person.

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SECTION X PREPARATION INFORMATION

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PREPARED BY : B.G.R. Chemical Products Inc.  
TELEPHONE : (514) 694-7442  
DATE : December 13<sup>th</sup>, 2011

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IMPORTANT: The information presented herein is believed to be accurate and is offered only as a guide. Users should make their own tests to determine the suitability of these products for their own particular purposes. Users assume all risk of use, storage and handling of the product. No warranty, express or implied, is made including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be construed as a license to operate under, or recommendation to infringe any patents.

MR  
JAN 17/2014

## Material Safety Data Sheet

LA7292

Calcium Hydroxide FCC - Vitacal H

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Id:** LA7292**Product Name:** Calcium Hydroxide FCC - Vitacal H**Synonyms:** Calcium hydrate ; slaked lime.**Chemical Family:** None Known**Application:** Suitable for use in food products in accordance with FDA regulations. Meets Food Chemicals Codex specifications.**Distributed By:**Univar Canada Ltd.  
9800 Van Horne Way  
Richmond, BC  
V6X 1W5**Prepared By:** The Environment, Health and Safety Department of Univar Canada Ltd.**Preparation date of MSDS:** 16/Dec/2013**Telephone number of preparer:** 1-866-686-4827**24-Hour Emergency Telephone Number (CANUTEC):** (613) 996-6666

## 2. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Calcium hydroxide 1305-62-0	99-100	Oral LD50 Rat = 7340 mg/kg

**Note:** This product may contain <0.1 - 0.2% Crystalline Silica (Quartz).

## 3. HAZARDS IDENTIFICATION

**Potential Acute Health Effects:****Eye Contact:** Corrosive. May cause severe eye irritation. Can cause redness, irritation, tearing, pain. May induce ulcerations of the corneal epithelium. Severe eye damage may cause blindness.**Skin Contact:** Corrosive. Can cause severe burns. Skin contact can cause chemical burns with severe blistering. Repeated contact with skin may cause severe cumulative dermatitis.**Inhalation:** Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Can cause chemical bronchitis. May aggravate existing respiratory disorders.**Ingestion:** Causes severe irritation or chemical burns of the mouth, throat, esophagus, and stomach. Symptoms may include severe pain, vomiting, diarrhea and collapse. If death doesn't occur in 24 hours, esophageal perforation may occur, as evidenced by fall in blood pressure and severe pain. A narrowing of the esophagus may occur weeks, months, or years after ingestion, making swallowing difficult.

LA7292

Calcium Hydroxide FCC - Vitacal H

Page 1 of 6

**4. FIRST AID MEASURES**

**Eye Contact:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Hold eyelids open during flushing.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

**Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

**Notes to Physician:** Treatment based on sound judgment of physician and individual reactions of patient.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** None.

**Flash Point Method:** Not applicable.

**Autoignition Temperature:** Not available.

**Flammable Limits in Air (%):** Not Available.

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

**Special Exposure Hazards:** Isolate and restrict area access. Stop leak only if safe to do so. Move containers from fire area if you can do it without risk. Emits toxic fumes when heated to decomposition or mixed with water.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Caustic fumes of calcium oxide.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**NFPA RATINGS FOR THIS PRODUCT ARE:** Not Available.

**HMIS RATINGS FOR THIS PRODUCT ARE:** HEALTH 2, FLAMMABILITY 0, REACTIVITY 0

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

**Procedure for Clean Up:** Isolate hazard area and restrict access. Ventilate area. Use a method that does not generate dust. Scoop up or vacuum up and place in an appropriate closed container.

**7. HANDLING AND STORAGE**

**Handling:** For food plant and other industrial use only. Handle and open containers with care. Never touch eyes of face with hands or gloves that may be contaminated with this product. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment.

**Storage:** Store in a cool, dry, well ventilated area. Store in accordance with good industrial practices. Place away from incompatible materials.

**8. EXPOSURE CONTROLS/ PERSONAL PROTECTION****Engineering Controls:**

Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

**Respiratory Protection:** If the exposure limit is exceeded, a half facepiece particulate respirator may be worn for up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Gloves:**

Appropriate chemical resistant gloves should be worn.

**Skin Protection:** Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Calcium hydroxide	5 mg/m <sup>3</sup> TLV-TWA	5 mg/m <sup>3</sup> TWA	Not Available

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Powder.

**Color:** White

**Odor:** Odorless

**pH 12.4** (saturated solution)

**Specific Gravity:** 2.24

**Boiling Point:** Decomposes. 2850 °C /5162 °F

**Freezing/Melting Point:** 580 °C / 1076 °F

**Vapor Pressure:** Not Available.

**Vapor Density:** Not Available.

**% Volatile by Volume:** 0

**Evaporation Rate:** Not Available.

**Solubility:** Slightly soluble in water. Water: 0.185% @ 0 °C

**VOCs:** Not Available.

**Viscosity:** Not Available.

**Molecular Weight:** Not Available.

**Other:** Not Available.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable. Readily absorbs carbon dioxide from air to form calcium carbonate.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Air. Avoid conditions that generate dust. Incompatible materials.

**Materials to Avoid:** Maleic Anhydride. Nitromethane and similar nitro compounds. Phosphorus. Acids.

**Hazardous Decomposition Products:** Thermal decomposition type : Calcium oxide.

**Additional Information:**

No additional remark.

**11. TOXICOLOGICAL INFORMATION****Principle Routes of Exposure**

**Ingestion:** Causes severe irritation or chemical burns of the mouth, throat, esophagus, and stomach. Symptoms may include severe pain, vomiting, diarrhea and collapse. If death doesn't occur in 24 hours, esophageal perforation may occur, as evidenced by fall in blood pressure and severe pain. A narrowing of the esophagus may occur weeks, months, or years after ingestion, making swallowing difficult.



**11. TOXICOLOGICAL INFORMATION**

**Skin Contact:** Corrosive. Can cause severe burns. Skin contact can cause chemical burns with severe blistering. Repeated contact with skin may cause severe cumulative dermatitis.

**Inhalation:** Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Can cause chemical bronchitis. May aggravate existing respiratory disorders.

**Eye Contact:** Corrosive. May cause severe eye irritation. Can cause redness, irritation, tearing, pain. May induce ulcerations of the corneal epithelium. Severe eye damage may cause blindness.

**Additional Information:** Respirable crystalline silica can cause silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death. There is evidence that the disease silicosis is associated with the increased incidence of scleroderma, an autoimmune disorder manifested by a fibrosis (scarring) of the skin and internal organs. Silicosis increases the risk of tuberculosis. There are several studies suggesting that exposure to respirable crystalline silica or that the disease silicosis is associated with the increased incidence of kidney disorder.

**Acute Test of Product:**

**Acute Oral LD50:** Not Available.

**Acute Dermal LD50:** Not Available.

**Acute Inhalation LC50:** Not Available.

**Carcinogenicity:**

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Calcium hydroxide	Not listed.	Not listed.

**Carcinogenicity Comment:** This product may contain >0.1% crystalline silica, in which case it is classified as a probable carcinogen. The International Agency for Research on Cancer has concluded that there is sufficient evidence for the carcinogenicity to humans. Cancer hazard. Contains crystalline silica which can cause cancer and delayed lung injury (silicosis). Crystalline silica is listed by NTP as a known human carcinogen, and it is classified by IARC in Group 1: materials for which there is sufficient evidence in humans for carcinogenicity.

**Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** Not Available.

**12. ECOLOGICAL INFORMATION****Ecotoxicological Information:**

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Calcium hydroxide	160 mg/L LC50 (Gambusia affinis) 96 h static	Not Available.	Not Available.

**Other Information:** This material is not expected to bioaccumulate.

**13. DISPOSAL CONSIDERATIONS**

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.

**14. TRANSPORT INFORMATION****DOT (U.S.):**

**DOT Shipping Name:** Not Regulated.

**DOT Hazardous Class:** Not Applicable.

**DOT UN Number:** Not Applicable.

**DOT Packing Group:** Not Applicable.

**DOT Reportable Quantity (lbs):** Not Available.

**Note:** No additional remark.

**Marine Pollutant:** No.

**14. TRANSPORT INFORMATION****TDG (Canada):****TDG Shipping Name:** Not Regulated.**Hazard Class:** Not Applicable.**UN Number:** Not Applicable.**Packing Group:** Not Applicable.**Note:** No additional remark.**Marine Pollutant:** No.**15. REGULATORY INFORMATION****U.S. TSCA Inventory Status:** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.**Note:** Not available.**U.S. Regulatory Rules**

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Calcium hydroxide	Not Listed.	Not Listed.	Not Listed.

**California Proposition 65:** Not Listed.**MA Right to Know List:** Listed.**New Jersey Right-to-Know List:** Listed.**Pennsylvania Right to Know List:** Listed.**WHMIS Hazardous Class:**

E CORROSIVE MATERIAL



**16. OTHER INFORMATION****Additional Information:**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Disclaimer:****NOTICE TO READER:**

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**\*\*\*END OF MSDS\*\*\***

## QC Meeting

Date: January 17, 2014

**Attendees:** Mehul, Daryl, Andy

**Invitees:** Svetlana, Mei

**Note taker:** Ramona

### **Minutes**

#### **Agenda :**

1. Review of minutes for QC meeting- Dec20/13
  - a. Green tags for drums will be placed by QC on first dash number with the Work Order during QC Label- Line Clearance Check to ensure that Green Tag is available even on weekends
  - b. QC (green & white) release stickers will be placed on all drums even when there are two or more lot numbers of a product in one shipment. QC ensures green tags are available during the weekends by putting them with the W.O.
  - c. The other lots would be lined or tagged until the previous lot is all done or run out.
  - d. Bottle inspection –SOP requires no change. Therefore, there will still be no dimension check but only physical inspection for foreign matter, etc. and count verification.
  - e. Aman working till Dec29th – start of rotation scheduling for Sunday shift
  - f. FP release – pulling out of orders ahead of release not allowed
2. Ankit (Andy) Solanki – new QC Team member
  - a. Schedule : 10-6 :30 for the training period
3. Overview of the duties :
  - a. Daryl – FP releases and Micro testing, (Formulated Products)
  - b. Mehul – Raw Materials (Liquids) and Labels, (Formulated Products)
  - c. Andy – Raw Materials (Solids) and Bottles/Caps, (Micro testing)
4. FP release : filing of Epsom scented salts COA with the weight sheets should be individual, by the lot number and then clipped/put together by the Work Order.
5. Sunday Shift Rotation : Andy starts Sunday shift work in February  
January 19, 2014 : Ramona
6. Weight sheets (Epsom salts): correction for the weights should indicate + or –
7. Others:
  - a. IPA 99% - Exxon – Supplier Quaification : sample submitted to QC for testing
  - b. SOP :003 - Stability: Reduced Testing
  - c. VENDOR CERTIFICATION

#### **Discussion:**



### MATERIAL SAFETY DATA SHEET

#### 01 – IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

PRODUCT NAME: CAMPHOR POWDER  
 SYNONYMS: CAMPHOR POWDER USP; CAMPHOR POWDER SYNTHETIC ; 1,7,7-TRIMETHYLBICYCLO[2.2.1]-HEPTAN-2-ONE  
 PRODUCT USE: AROMATIC CHEMICAL  
 ADDRESS: Corporation NOVOTASTE INC.  
 3650 BOUL. MATTE  
 BROSSARD, QC  
 J4Y 2Z2 CANADA  
 PREPARATION DATE OF MSDS: 2008/09/16 BY: QUALITY ASSURANCE (450-444-2850)  
 LAST UPDATE: 2013/08/14  
 EMERGENCY NUMBER: 613-996-6666 (CANUTEC)

#### 02 – COMPOSITION / INFORMATION ON INGREDIENTS

CAS NUMBER: 76-22-2  
 EINECS NUMBER: 200-945-0  
 FEMA NUMBER: 4513

#### 03 – HAZARDS IDENTIFICATION

PHYSICAL AND CHEMICAL HAZARD:  
 REFER TO THE PARAGRAPHS RELATING TO PHYSICO-CHEMICAL PROPERTIES AND REGULATORY INFORMATION.  
HAZARDS TO MAN:  
 REFER TO THE PARAGRAPHS RELATING TO TOXICOLOGICAL DATA AND REGULATORY INFORMATION.  
HAZARDS TO THE ENVIRONMENT:  
 REFER TO THE PARAGRAPHS RELATING TO ECOLOGICAL DATA AND REGULATORY INFORMATION.

#### 04 – FIRST-AID MEASURES

SKIN CONTACT:  
 WASH WITH LARGE QUANTITIES OF WATER (OR WATER + SOAP). REMOVE CONTAMINATED CLOTHES AND SHOES.  
 IF IRRITATION PERSISTS OR ANY SIGN OF TISSUE DAMAGE IS APPARENT, OBTAIN MEDICAL ADVICE.  
EYE CONTACT:  
 REMOVE CONTACT LENSES. IRRIGATE COPIOUSLY WITH WATER FOR AT LEAST FIFTEEN MINUTES.  
 OBTAIN MEDICAL ADVICE IF IRRITATION OR EVIDENCE OF TISSUE DAMAGE PERSISTS.  
INGESTION:  
 RINSE MOUTH WITH WATER. OBTAIN IMMEDIATE MEDICAL ADVICE.  
 DO NOT INDUCE VOMITING.  
INHALATION:  
 REMOVE THE PERSON TO FRESH AIR AND KEEP AT REST.  
 OBTAIN MEDICAL ADVICE IMMEDIATELY.

#### 05 – FIRE- FIGHTING MEASURES

EXTINGUISHING MEDIA:  
 RECOMMENDED: CARBON DIOXIDE, SPECIAL LIQUID OR DRY POWDER EXTINGUISHERS.  
 USABLE: FOAM EXTINGUISHERS.  
 INADVISABLE: DIRECT WATER JET.

UNUSUAL FIRE AND EXPLOSION HAZARDS:  
 CLOSED CONTAINERS MAY BUILD UP PRESSURE AT ELEVATED TEMPERATURES.  
 IF POSSIBLE, CONTAINERS SHOULD BE COOLED WITH A WATER SPRAY.

#### 06 – ACCIDENTAL RELEASE MEASURES

TO AVOID A POSSIBLE CONTAMINATION OF THE ENVIRONMENT, CONTAIN SPILLED MATERIAL.  
 COVER WITH AN INERT, INORGANIC, NON-COMBUSTIBLE ABSORBENT MATERIAL, SWEEP UP AND REMOVE TO AN  
 APPROVED DISPOSAL CONTAINER.  
 DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.  
 AVOID OPEN FLAMES OR OTHER SOURCES OF IGNITION. AVOID INHALATION OF VAPORS.

#### 07 – HANDLING AND STORAGE

## HANDLING

MEASURES SHOULD BE TAKEN TO PREVENT MATERIALS FROM BEING SPLASHED INTO THE EYES OR ON THE SKIN. THIS SHOULD INCLUDE THE WEARING OF EYESHIELDS AND PROTECTIVE CLOTHING. SMOKING SHOULD NOT BE PERMITTED IN AREAS WHERE THEY ARE HANDLED. SPONTANEOUS COMBUSTION OF CERTAIN PRODUCT SOAKED RAGS HAVE BEEN REPORTED. MAINTAIN ADEQUATE AIR CIRCULATION IN THE WORKING AREA.

## STORAGE

STORE IN TIGHTLY SEALED AND PREFERABLY FULL CONTAINERS IN A COOL, DRY LOCATION. PROTECT FROM LIGHT. CHECK QUALITY BEFORE USE IF STORED FOR MORE THAN 6 MONTHS. KEEP IN SUITABLE OR ORIGINAL CONTAINER. STORAGE DETAILS ARE IN THE PRODUCT SPECIFICATIONS SHEET.

## 08 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: IN WELL-VENTILATED AREAS, RESPIRATORY PROTECTION IS NOT NORMALLY REQUIRED. IN CONFINED, POORLY VENTILATED AREAS, IT MAY BE REQUIRED.  
HAND PROTECTION: THE USE OF CHEMICAL RESISTANT GLOVES IS RECOMMENDED  
EYE PROTECTION: THE USE OF SAFETY GLASSES IS RECOMMENDED  
SKIN PROTECTION: LIGHT PROTECTIVE CLOTHING IS RECOMMENDED.  
VENTILATION: PROVIDE ADEQUATE VENTILATION; USE LOCAL EXHAUST FAN IF NECESSARY.

## 09 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: SOLID CRYSTALS  
COLOR: WHITE  
ODOR: CHARACTERISTIC (ODOR THRESHOLD: NOT DETERMINED)

FLASH POINT (CC) (°C): 66°C  
WATER SOLUBILITY: SOLUBLE  
SPECIFIC GRAVITY (25° C): NOT DETERMINED  
REFRACTIVE INDEX (20°C): NOT DETERMINED  
BOILING POINT: 207°C  
MELTING POINT (FREEZING POINT): 180°C  
VAPOR PRESSURE: 0.18 mm Hg @ 20°C  
VAPOR DENSITY (AIR=1): NOT DETERMINED  
PARTITION COEFFICIENT n-OCTANOL/WATER: NOT DETERMINED  
SELF-IGNITION TEMPERATURE: NOT DETERMINED  
PH: NOT APPLICABLE  
EVAPORATION RATE: NOT DETERMINED

## 10 – STABILITY AND REACTIVITY

STABILITY: STABLE  
CONDITION TO AVOID: EXCESSIVE HEAT, OPEN FLAMES OR OTHER SOURCES OF IGNITION.

## 11 – TOXICOLOGICAL INFORMATION

LIQUID MAY BE IRRITATING TO SKIN AND EYES.  
LD<sub>50</sub> () =  
LC<sub>50</sub> () = NOT DETERMINED  
POTENTIAL SYMPTOMS OF OVEREXPOSURE ARE IRRITATION OF EYES, SKIN, MUCOUS MEMBRANES; NAUSEA, VOMITING, DIARRHEA.; HEADACHE, DIZZINESS, CONFUSION, VERTIGO, EXCITEMENT, RESTLESSNESS, DELIRIUM, HALLUCINATIONS; EPILEPTIC CONVULSIONS; CNS DEPRESSEION, COMA.

## 12 – ECOLOGICAL INFORMATION

NO ECOTOXICOLOGIC INFORMATION KNOWN AT THIS TIME  
AVOID ANY POLLUTION OF GROUND, SURFACE OR UNDERGROUND WATER.

## 13 – DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

## 14 – TRANSPORTATION INFORMATION

UN NUMBER: 2717  
100171

TRANSPORTATION CLASS: 4.1  
PACKING GROUP: III  
MARINE POLLUTANT: NOT DETERMINED

## 15 – REGULATORY INFORMATION

WHMIS CLASSIFICATION: D2B/B4 FLAMMABLE SOLID  
THIS PRODUCT HAS BEEN CLASSIFIED ACCORDING TO THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

HMIS RATING:  
HEALTH HAZARD: 1  
FLAMMABILITY: 2  
REACTIVITY: 0

EU CLASSIFICATION: Xn – HARMFUL

R-SENTENCES:  
R20: HARMFUL BY INHALATION  
R68/22: HARMFUL: POSSIBLE RISK OF IRREVERSIBLE EFFECTS IF SWALLOWED

S-SENTENCES:  
S36/37: WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES.

GHS CLASSIFICATION:  
FLAMMABLE SOLID, CATEGORY 2 .  
ACUTE TOXICITY (INHALATION), CATEGORY 4.  
SPECIFIC TARGET ORGAN TOXICITY, SINGLE EXPOSURE, CATEGORY 2.

SIGNAL WORD: WARNING

HAZARD STATEMENTS:  
H228: FLAMMABLE SOLID.  
H332: HARMFUL IF INHALED.  
H371: MAY CAUSE DAMAGE TO ORGANS.

PRECAUTIONARY STATEMENTS:  
P210: KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.  
P240: GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.  
P241: USE EXPLOSION-PROOF ELECTRICAL/VENTILATING/LIGHTING/EQUIPMENT  
P260: DO NOT BREATHE DUST.  
P264: WASH THOROUGHLY AFTER HANDLING.  
P270: DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.  
P271: USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.  
P280: WEAR PROTECTIVE GLOVES/CLOTHING/EYE PROTECTION/FACE PROTECTION.  
REFER TO THE PARAGRAPHS RELATING TO THIS INFORMATION.

## 16 – OTHER INFORMATION

CONTROLLED PRODUCTS REGULATION (CPR) (UNDER THE HAZARDOUS PRODUCTS ACT, WHICH IS PART OF THE LEGISLATION RELATIVE TO WHMIS) APPLIES ONLY TO CONTROLLED PRODUCTS (THAT IS TO SAY DANGEROUS) PURSUANT TO WHMIS. THEREFORE, THE NON-CONTROLLED PRODUCTS PURSUANT TO WHMIS ARE NOT SUBJECT TO CPR, NOR TO THE RULE OF UPDATING EVERY 3 YEARS. AS A GENERAL RULE NOVOTASTE UPDATES PRODUCT MSDS AT CUSTOMER REQUEST. UPDATES OF NON-CONTROLLED PRODUCT MSDS ARE OF LESS IMPORTANCE THAN THOSE OF CONTROLLED PRODUCTS. UPDATES OF NON-CONTROLLED PRODUCTS MSDS MUST NEVERTHELESS BE MADE WITHIN A REASONABLE TIME.

## 16 – OTHER INFORMATION

## DISCLAIMER

THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THE DATA SHEET REPRESENT, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, AN ACCURATE AND RELIABLE REPRESENTATION AS TO THE KNOWN DATA FOR THIS MATERIAL. THE DATA HAS BEEN OBTAINED FROM A NUMBER OF SOURCES AND NOVOTASTE CANNOT GUARANTEE ITS ACCURACY, RELIABILITY AND COMPLETENESS NOR CAN NOVOTASTE ASSUME ANY LIABILITY FOR ANY LOSS OR DAMAGE ARISING OUT OF THE USE OF THIS DATA. IT IS THE USER'S RESPONSIBILITY TO EVALUATE THIS INFORMATION IN A PRUDENT MANNER AND TO USE IT IN A MANNER THAT IS CONSISTENT FOR ITS PARTICULAR PURPOSE.

*Cwp Nov 13/13*



## Aksh Industries., Inc.

6741 Columbus Road, Unit # 15-18, Mississauga, Ontario, Canada L5T 2G9 Tel: 905-696-7011 Fax: 905-696-7015

### MATERIAL SAFETY DATA SHEET

#### SECTION 1 - CHEMICAL IDENTIFICATION

Supplier : Aksh Industries Inc, 6741 Columbus Rd, Unit# 15-18,  
: Mississauga, Ontario, L5T 2G9 , Canada  
Telephone : 905-696-7011  
Fax : 905-696-7015  
Product Name : **Castor Oil**  
Chemicals Name : Triglyceride  
CAS No : 8001-79-4

#### SECTION 2 - COMPOSITION

Composition : Triglyceride ester of fatty acids, min 82% is 12-Hydroxy Oleic Acid by GLC

#### SECTION 3 - HAZARDS IDENTIFICATIONS

Castor Oil is not a hazardous material nor does it contain any hazardous ingredients.

#### SECTION 4 - FIRST AID MEASURES

In case of ingestion, rinse the mouth. In case of inhalation remove to fresh air immediately.  
In case of skin contact, wash with plenty of water & soap.  
In case of eye contact, rinse with plenty of water.

#### SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media : Foam, Carbon dioxide, water, dry chemical powder.

Unsuitable Extinguishing media : No restrictions.

In case of fire carbon monoxide & carbon dioxide can be formed.

Special protective equipment : Not required, except regular fire-fighters equipment.

#### SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions : None  
Environmental Precautions : None  
Methods for cleaning up : Soap up spill with sand or earth & detergent

#### SECTION 7 - HANDLING AND STORAGE

Handling : Keep away from sources of ignition.  
Storage : Keep containers close and in dry shaded godown, away from heat.

#### SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures : No special measures required.  
Control Parameters : Not available.  
Personal protection : Usual, as taken for handling chemicals.  
a) respiratory equipment : None



- b) hand protection : Hand Savers  
c) eye protection : Protective Glasses  
d) skin protection : None

#### **SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES**

Appearance	: Yellowish viscous liquid
Odor	: Like vegetable oil
pH	: Not Applicable
Boiling point/boiling range	: Above 300 deg. C
Melting point/melting range	: N/A
Flash Point	: Above 300 deg. C
Flammability (solid, gas)	: None
Autoflammability	: None
Explosive properties	: None
Oxidizing properties	: None
Vapour pressure	: Not applicable
Relative density	: about 0.95 at 25 deg. C
Solubility - Water solubility	: Insolubility
fat solubility	: soluble in ethanol at room temperatures
Partition coefficient	: Not available
Other data	: Viscosity at 25 deg C , about 600-800 cst

#### **SECTION 10 - STABILITY & REACTIVITY**

Conditions to avoid	: Keep away from oxidizing materials
Materials to avoid	: Oxidizing materials & sources of ignition.
Hazardous decomposition product:	None if handled & stored according to prescription.

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

Expected LD50 ori-rate>5000 mg/kg based on data taken from similar product.

#### **SECTION 12 - ECOLOGICAL INFORMATION**

Mobility	: Not determined
Degradability	: Readily biodegradable
Accumulation	: Minimum biodegradability is 60% BSB30/CSB resp. 70% DOC
Short & long term effects on Exotc:	Acute fish toxicity LCO>100 mg/l, Bacteria Toxicity ECO>100 mg/l
Other adverse effects	: None

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Can be lanfilled together with household refuse, in accordance with the regulations.

#### **SECTION 14 - TRANSPORT INFORMATION**

Not classified as hazardous.

#### **SECTION 15 - REGULATORY INFORMATION**

According to EEC Council Directive, it is not a dangerous substance, but suitable precautions of handling chemicals should be taken.

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The information and recommendations contained in this Data Sheet are believed to be accurate & represent the best information currently available to us. No warranty, guarantee or representation is made by us to the absolute correctness or sufficiency of the information & recommendations in this Data Sheet; nor can it be assumed that all possible safety measures are contained in this Data Sheet or other measures may not be required under varying circumstances.

**MATERIAL SAFETY DATA SHEET****01 – IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY**

**PRODUCT NAME:** CLOVE STEM OIL  
**SYNONYM:** CLOVE OIL  
**PRODUCT USE:** FLAVOR, FRAGRANCE  
**ADDRESS:** Corporation NOVOTASTE INC.  
3650 BOUL. MATTE  
BROSSARD, QC  
J4Y 2Z2 CANADA  
**PREPARATION DATE OF MSDS:** 2010/12/15  
**LAST UPDATE:** 2010/12/15  
**EMERGENCY NUMBER:** 613-996-6666 (CANUTEC)

BY: QUALITY ASSURANCE (450-444-2850)

**02 – COMPOSITION / INFORMATION ON INGREDIENTS**

**CAS NUMBER:** 8000-34-8  
**EINECS NUMBER:** 284-638-7  
**FEMA NUMBER:** 2325

**03 – HAZARDS IDENTIFICATION****PHYSICAL AND CHEMICAL HAZARD:**

REFER TO THE PARAGRAPHS RELATING TO PHYSICO-CHEMICAL PROPERTIES AND REGULATORY INFORMATION.

**HAZARDS TO MAN:**

REFER TO THE PARAGRAPHS RELATING TO TOXICOLOGICAL DATA AND REGULATORY INFORMATION.

**HAZARDS TO THE ENVIRONMENT:**

REFER TO THE PARAGRAPHS RELATING TO ECOLOGICAL DATA AND REGULATORY INFORMATION.

**04 – FIRST-AID MEASURES****SKIN CONTACT:**

WASH WITH LARGE QUANTITIES OF WATER (OR WATER + SOAP). REMOVE CONTAMINATED CLOTHES AND SHOES.  
IF IRRITATION PERSISTS OR ANY SIGN OF TISSUE DAMAGE IS APPARENT, OBTAIN MEDICAL ADVICE.

**EYE CONTACT:**

REMOVE CONTACT LENSES. IRRIGATE COPIOUSLY WITH WATER FOR AT LEAST FIFTEEN MINUTES.  
OBTAIN MEDICAL ADVICE IF IRRITATION OR EVIDENCE OF TISSUE DAMAGE PERSISTS.

**INGESTION:**

RINSE MOUTH WITH WATER. OBTAIN IMMEDIATE MEDICAL ADVICE.  
DO NOT INDUCE VOMITING.

**INHALATION:**

REMOVE THE PERSON TO FRESH AIR AND KEEP AT REST.  
OBTAIN MEDICAL ADVICE IMMEDIATELY.

**05 – FIRE- FIGHTING MEASURES****EXTINGUISHING MEDIA:**

**RECOMMENDED:** CARBON DIOXIDE, SPECIAL LIQUID OR DRY POWDER EXTINGUISHERS.  
**USABLE:** FOAM EXTINGUISHERS.  
**INADVISABLE:** DIRECT WATER JET.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

CLOSED CONTAINERS MAY BUILD UP PRESSURE AT ELEVATED TEMPERATURES.  
IF POSSIBLE, CONTAINERS SHOULD BE COOLED WITH A WATER SPRAY.

**06 – ACCIDENTAL RELEASE MEASURES**

TO AVOID A POSSIBLE CONTAMINATION OF THE ENVIRONMENT, CONTAIN SPILLED MATERIAL.  
COVER WITH AN INERT, INORGANIC, NON-COMBUSTIBLE ABSORBENT MATERIAL, SWEEP UP AND REMOVE TO AN APPROVED DISPOSAL CONTAINER.  
DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.  
AVOID OPEN FLAMES OR OTHER SOURCES OF IGNITION. AVOID INHALATION OF VAPORS.

**07 – HANDLING AND STORAGE**

## HANDLING

MEASURES SHOULD BE TAKEN TO PREVENT MATERIALS FROM BEING SPLASHED INTO THE EYES OR ON THE SKIN. THIS SHOULD INCLUDE THE WEARING OF EYESHIELDS AND PROTECTIVE CLOTHING. SMOKING SHOULD NOT BE PERMITTED IN AREAS WHERE THEY ARE HANDLED. SPONTANEOUS COMBUSTION OF CERTAIN PRODUCT SOAKED RAGS HAVE BEEN REPORTED. MAINTAIN ADEQUATE AIR CIRCULATION IN THE WORKING AREA.

## STORAGE

STORE IN TIGHTLY SEALED AND PREFERABLY FULL CONTAINERS IN A COOL, DRY LOCATION. PROTECT FROM LIGHT. CHECK QUALITY BEFORE USE IF STORED FOR MORE THAN 6 MONTHS. KEEP IN SUITABLE OR ORIGINAL CONTAINER

## 08 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: IN WELL-VENTILATED AREAS, RESPIRATORY PROTECTION IS NOT NORMALLY REQUIRED. IN CONFINED, POORLY VENTILATED AREAS, IT MAY BE REQUIRED.  
HAND PROTECTION: THE USE OF CHEMICAL RESISTANT GLOVES IS RECOMMENDED  
EYE PROTECTION: THE USE OF SAFETY GLASSES IS RECOMMENDED  
SKIN PROTECTION: LIGHT PROTECTIVE CLOTHING IS RECOMMENDED.  
VENTILATION: PROVIDE ADEQUATE VENTILATION; USE LOCAL EXHAUST FAN IF NECESSARY.

## 09 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: LIQUID  
COLOR: PALE YELLOW TO BROWNISH  
ODOR: CHARACTERISTIC (ODOR THRESHOLD: NOT DETERMINED)

FLASH POINT (CC) (°C): > 93.3°C  
WATER SOLUBILITY: INSOLUBLE  
SPECIFIC GRAVITY (25°C): 1.0376 (TYPICAL)  
REFRACTIVE INDEX (20°C): 1.5320 (TYPICAL)  
BOILING POINT: NOT DETERMINED  
MELTING POINT: NOT DETERMINED  
FREEZING POINT: NOT DETERMINED  
VAPOR PRESSURE: NOT DETERMINED  
VAPOR DENSITY (AIR=1): NOT DETERMINED  
PARTITION COEFFICIENT n-OCTANOL/WATER: NOT DETERMINED  
SELF-IGNITION TEMPERATURE: NOT DETERMINED  
PH: NOT APPLICABLE  
EVAPORATION RATE: NOT DETERMINED

## 10 – STABILITY AND REACTIVITY

STABILITY: STABLE  
CONDITION TO AVOID: EXCESSIVE HEAT, OPEN FLAMES OR OTHER SOURCES OF IGNITION.

## 11 – TOXICOLOGICAL INFORMATION

LIQUID MAY BE IRRITATING TO SKIN AND EYES. MAY CAUSE ALLERGIC DERMATITIS. INGESTION CAN RESULT IN GASTROENTERITIS. LIQUID CONTAINS EUGENOL:  
LD<sub>50</sub> (ORAL, RAT) = 1930 mg/kg

## 12 – ECOLOGICAL INFORMATION

NO ECOTOXICOLOGIC INFORMATION KNOWN AT THIS TIME  
AVOID ANY POLLUTION OF GROUND, SURFACE OR UNDERGROUND WATER.

## 13 – DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

## 14 – TRANSPORTATION INFORMATION

UN NUMBER: NOT APPLICABLE  
RID/ADR, IMDG, ICAS/IATA: NOT APPLICABLE

15 – REGULATORY INFORMATION

WHMIS CLASSIFICATION: D2B

THIS PRODUCT HAS BEEN CLASSIFIED ACCORDING TO THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16 – OTHER INFORMATION

DISCLAIMER

THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THE DATA SHEET REPRESENT, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, AN ACCURATE AND RELIABLE REPRESENTATION AS TO THE KNOWN DATA FOR THIS MATERIAL. THE DATA HAS BEEN OBTAINED FROM A NUMBER OF SOURCES AND NOVOTASTE CANNOT GUARANTEE ITS ACCURACY, RELIABILITY AND COMPLETENESS NOR CAN NOVOTASTE ASSUME ANY LIABILITY FOR ANY LOSS OR DAMAGE ARISING OUT OF THE USE OF THIS DATA. IT IS THE USER'S RESPONSIBILITY TO EVALUATE THIS INFORMATION IN A PRUDENT MANNER AND TO USE IT IN A MANNER THAT IS CONSISTENT FOR ITS PARTICULAR PURPOSE.

	DOT Not regulated
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**HMIS Graphic**

Health Hazard	<b>0</b>
Fire Hazard	<b>1</b>
Reactivity	<b>0</b>

Revision Date 30-Aug-2010

*Printed on Nov 13/13 Conf*

Revision Number 0

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name**  
**Product Code**  
**Recommended Use**

D&C Red No. 33  
K7057  
Color Additive

**Contact Manufacturer**  
Sensient Colors Inc.  
2526 Baldwin Street  
St. Louis, MO 63106  
Telephone: 1-800-325-8110  
Fax: 1-314-658-7314

**Emergency Telephone Number**

Chemtrec 1-800-424-9300 Emergency Phone Number (24 hours)  
Outside US: 1-703-527-3887  
Chemtrec Administrative Office Telephone Number 1-800-262-8200

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Red. Physical State Powder Odor None

OSHA Regulatory Status This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principle Routes of Exposure Eye contact, Skin contact, Inhalation

**Acute Effects**

Eyes May cause slight irritation by mechanical action.  
 Skin Substance may cause slight skin irritation in sensitive individuals.  
 Inhalation May be irritating to the respiratory tract.  
 Ingestion May be harmful if swallowed.

Chronic Effects Repeated contact may cause allergic reactions in very susceptible persons.

Aggravated Medical Conditions Excessive dust may aggravate pre-existing lung disease.

Interactions with Other Chemicals No information available.

Potential Environmental Effects There is no known ecological information for this product.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Hazardous Components

Non-Hazardous Components

Chemical Name	CAS-No	Weight %
D&C RED NO. 33	3567-66-6	PROPRIETARY

**4. FIRST AID MEASURES**

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact To reduce coloration of the skin, wash off immediately with soap and plenty of water removing all contaminated clothes and shoes to avoid coloration of the skin.

Inhalation Move to fresh air. If breathing is difficult provide oxygen.

Ingestion If the individual is conscious, clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.

Notes to Physician Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

<b>Flammability</b>	<b>Non-Flammable</b>
<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable extinguishing media</b>	Not available.
<b>Hazardous Combustion Products</b>	The combustion of this product may emit obnoxious and toxic fumes.
<b>Explosion Data</b>	
<b>Sensitivity to static discharge</b>	Material is not sensitive to static discharge. Material as with any organic dust may be ignited by a static spark if extremely dusty conditions are produced.
<b>Sensitivity to mechanical impact</b>	Material is not sensitive to mechanical impact.
<b>Specific Hazards Arising from the Chemical</b>	Keep product and empty container away from sources of heat.
<b>Protective Equipment and Precautions for Firefighters</b>	Use self-contained breathing apparatus and full protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Ensure adequate ventilation. Avoid contact with the eyes to prevent irritation. Barriers and protective equipment for the skin may be used to avoid discoloration. Use respiratory protection if excessive dust will be created.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Containment</b>	No information available. Avoid creating airbourne dust to the extent feasible.. Sweep and scoop up and place material in a bag and hold for waste disposal.
<b>Methods for Clean-up</b>	Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Take precautionary measures against static discharges. Sweep or vacuum. Collect in a suitable container. Water or other cleanser may be used to facilitate clean up of buildings or equipment. Note: water contacting the product will be colored and should be disposed off in accordance with local requirements.
<b>Other Information</b>	Not applicable

## 7. HANDLING AND STORAGE

<b>Handling</b>	Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe vapours/dust. Avoid dust formation. Take precautionary measures against static discharges. Dust is combustible. Therefore, keep concentrations below ignitable concentrations in material handling equipment such as transfer lines and process equipment. Clean up residue to avoid dust accumulation.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

**Engineering Measures** Minimize the creation of dust. Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

**Eye/face Protection** Safety glasses with side-shields.

**Skin Protection** Long sleeved clothing.

**Respiratory Protection** No special protective equipment required under conditions of normal use. If exposure to dust, mist, and/or vapors is likely, a NIOSH approved respirator is recommended.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Red	<b>Odor</b>	None
<b>Physical State</b>	Powder		

<b>Solubility</b>	Soluble
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## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable under normal conditions.

**Conditions to Avoid** Heat, flames and sparks. Avoid dust formation.

**Incompatible Materials** No materials to be especially mentioned.

**Hazardous Decomposition Products** None under normal use. Material is non-combustible.

**Possibility of Hazardous Reactions** None under normal processing.



**11. TOXICOLOGICAL INFORMATION**Acute Toxicity**Component Information**Chronic Toxicity**Carcinogenicity**

There are no known carcinogenic chemicals in this product

Subchronic Toxicity**Irritation**

This powder may cause mechanical irritation on contact with eye.

**Corrosivity**

Not available

**Sensitization**

Not available

**Neurological Effects**

Not available

**Mutagenic Effects**

Not available

**Reproductive Effects**

Not available

**Developmental Effects**

Not available

**Target Organ Effects**

Not available

**12. ECOLOGICAL INFORMATION**Ecotoxicity

No information available

**Persistence/Degradability**

Not available

**Bioaccumulation/ Accumulation**

Not available

**Mobility in Environmental Media**

Not available

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method**

Dispose of in accordance with local regulations.

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

**US EPA Waste Number**

Not available

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated  
 Not regulated  
 Not regulated

**15. REGULATORY INFORMATION**

International Inventories

**Hazardous Components**  
**Non-Hazardous Components**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
D&C RED NO. 33	X	X	-	X	-	X	X	X	X	X

USA

Federal Regulations

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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

State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

This product is not governed by any additional state regulations.

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

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**16. OTHER INFORMATION**

**Revision Date** 30-Aug-2010

**Revision Summary** Not available

**Disclaimer**

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

End of MSDS



# SAFETY DATA SHEET

## D-00436 DILLWEED OIL 30/32%

Revision Date: 02-25-2014

Page 1 of 11

Version # 02

Print Date: 02-25-2014

*Pin*  
*APR 25 / 14*

### 1. IDENTIFICATION

**Product Description:** DILLWEED OIL 30/32%

**CAS #** 8006-75-5

**FEMA Number** 2384

**Other means of identification**

**Vigon Item #** D-00436

**Recommended use** Concentrated aromatic and flavor ingredient which may be used in flavor and fragrance compounds according to legal and IFRA or FEMA GRAS/FDA guidelines.

**Recommended restrictions** For Manufacturing Use Only

**Company** Vigon International, Inc.  
127 Airport Road  
E. Stroudsburg, PA 18301  
For information call: 570-476-6300  
Web Site: www.vigon.com

**24 Hour Emergency Response Information**  
INFOTRAC (ACCT# 78928);  
1-800-535-5053 WITHIN THE U.S.A.  
1-352-323-3500 OUTSIDE THE U.S.A.

### 2. HAZARD(S) IDENTIFICATION

<b>Physical hazards</b>	Flammable liquids	Category 3
<b>Health hazards</b>	Acute toxicity, oral	Category 5
	Skin corrosion/irritation	Category 2
	Sensitization, skin	Category 1
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

#### Label elements



**Signal word** Danger

#### Hazard statement

H226	Flammable liquid and vapor.
H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.



# SAFETY DATA SHEET

## D-00436 DILLWEED OIL 30/32%

Revision Date: 02-25-2014

Page 2 of 11

Version # 02

Print Date: 02-25-2014

### Precautionary statement

#### Prevention

- P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P261 - Avoid breathing mist or vapor.
- P264 - Wash thoroughly after handling.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/eye protection/face protection.

#### Response

- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P312 - Call a POISON CENTER/doctor if you feel unwell.
- P321 - Specific treatment (see this label).
- P331 - Do NOT induce vomiting.
- P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P362 + P364 - Take off contaminated clothing and wash it before reuse.
- P370 + P378 - In case of fire: Use appropriate media to extinguish.
- P391 - Collect spillage.

#### Storage

- P403 + P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.

#### Disposal

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

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

Not applicable.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substances

Hazardous components Chemical name	Common name and synonyms	CAS number	%
DILLWEED OIL		8006-75-5	100

### 4. FIRST-AID MEASURES

#### Inhalation

If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

#### Skin contact

Take off immediately all contaminated clothing. Get medical attention if irritation develops or persists. Wash skin thoroughly with soap and water for several minutes.

#### Eye contact

Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.



## SAFETY DATA SHEET

D-00436 DILLWEED OIL 30/32%

Revision Date: 02-25-2014

Page 3 of 11

Version # 02

Print Date: 02-25-2014

Ingestion	Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Not available.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

### 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Water spray, fog, CO <sub>2</sub> , dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Fire may produce irritating, corrosive and/or toxic gases.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage. Ventilate closed spaces before entering them. Keep run-off water out of sewers and water sources. Dike for water control.
Specific methods	Use water spray to cool unopened containers.
General fire hazards	Static charges generated by emptying package in or near flammable vapor may cause flash fire.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor.
Methods and materials for containment and cleaning up	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Clean surface thoroughly to remove residual contamination. Collect and dispose of spillage as indicated in section 13 of the SDS. Never return spills in original containers for re-use.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Retain and dispose of contaminated wash water.

### 7. HANDLING AND STORAGE

Precautions for safe handling	Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid prolonged exposure. Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing.
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## SAFETY DATA SHEET

D-00436 DILLWEED OIL 30/32%

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**Conditions for safe storage, including any incompatibilities**      Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits**      No exposure limits noted for ingredient(s).  
**Biological limit values**      No biological exposure limits noted for the ingredient(s).  
**Appropriate engineering controls**      Use explosion-proof ventilation equipment to stay below exposure limits.  
**Individual protection measures, such as personal protective equipment**  
    **Eye/face protection**      Face shield is recommended. Wear safety glasses with side shields (or goggles).  
    **Skin protection**  
        **Hand protection**      Chemical resistant gloves.  
        **Other**      Use of an impervious apron is recommended.  
    **Respiratory protection**      If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory protection not required.  
    **Thermal hazards**      Wear appropriate thermal protective clothing, when necessary.  
**General hygiene considerations**      When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**      Refer to Spec Sheet  
    **Physical state**      Liquid.  
    **Form**      Liquid.  
    **Color**      Refer to Spec Sheet  
**Odor**      Characteristic.  
**Odor threshold**      Not available.  
**pH**      Not available.  
**Melting point/freezing point**      Not available.  
**Initial boiling point and boiling range**      Not available.  
**Flash point**      120.0 °F (48.9 °C) Closed Cup  
**Evaporation rate**      Not available.  
**Flammability (solid, gas)**      Not available.  
**Upper/lower flammability or explosive limits**  
    **Flammability limit - lower (%)**      Not available.  
    **Flammability limit - upper (%)**      Not available.  
    **Explosive limit - lower (%)**      Not available.  
    **Explosive limit - upper (%)**      Not available.



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Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Flammability class	Combustible II estimated
Molecular formula	Not applicable
Specific gravity	0.89

#### 10. STABILITY AND REACTIVITY

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products if stored and handled as indicated.

#### 11. TOXICOLOGICAL INFORMATION

##### Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways. May be harmful if swallowed.
Inhalation	May be fatal if swallowed and enters airways.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation. Causes mild eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	May cause an allergic skin reaction. Skin irritation. May cause redness and pain. Dermatitis. Rash.

##### Information on toxicological effects

Acute toxicity	May be fatal if swallowed and enters airways. May cause an allergic skin reaction. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.
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## SAFETY DATA SHEET

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Product	Species	Test Results
DILLWEED OIL (CAS 8006-75-5)		
Acute		
Oral		
LD50	Rat	4040 mg/kg

\* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. DISPOSAL CONSIDERATIONS

Disposal instructions	Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	Not established.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).



## SAFETY DATA SHEET

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**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

#### 14. TRANSPORT INFORMATION

##### ADN

UN number 1197  
UN proper shipping name EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)  
Transport hazard class(es) 3  
Subsidiary class(es) -  
Packing group III  
Environmental hazards Yes  
Labels required 3  
Special precautions for user Not available.

##### ADR

UN number 1197  
UN proper shipping name EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)  
Transport hazard class(es) 3  
Subsidiary class(es) -  
Packing group III  
Environmental hazards No  
Tunnel restriction code D/E  
Labels required 3  
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

##### RID

UN number 1197  
UN proper shipping name EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)  
Transport hazard class(es) 3  
Subsidiary class(es) -  
Packing group III  
Environmental hazards No  
Labels required 3  
Special precautions for user Not available.

##### DOT

##### BULK

UN number 1197  
Proper shipping name EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)  
Hazard class 3  
Packing group III  
Environmental hazards  
Marine pollutant Yes  
Special precautions Read safety instructions, SDS and emergency procedures before handling.  
Special provisions B1, IB3, T2, TP1  
Packaging exceptions 150  
Packaging non bulk 203  
Packaging bulk 242



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### DOT

#### NON-BULK

Not regulated as dangerous goods.

#### IATA

UN number	1197
UN proper shipping name	EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	III
Environmental hazards	Not available.
Labels required	3
ERG code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

UN number	1197
UN proper shipping name	EXTRACTS, FLAVOURING, LIQUID (DILLWEED OIL)
Transport hazard class(es)	3
Subsidiary class(es)	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
Labels required	3
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

ADN; ADR; DOT BULK; IATA; IMDG; RID





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Marine pollutant



### 15. REGULATORY INFORMATION

#### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - No

##### SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical      Yes

##### SARA 313 (TRI reporting)

Not regulated.

#### Other federal regulations

##### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

##### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

##### Safe Drinking Water Act (SDWA)

Not regulated.

##### Food and Drug Administration (FDA)

Total food additive  
Direct food additive  
GRAS food additive



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### US state regulations

#### US. Massachusetts RTK - Substance List

Not regulated.

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

#### US. Pennsylvania RTK - Hazardous Substances

Not regulated.

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

### 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Issue date	01-29-2014
Revision date	02-25-2014
Version #	02
HMIS® ratings	Health: 1 Flammability: 2 Physical hazard: 0



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### Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The above information relates only to this product and not to its use in combination with any other material or any particular process and is designed only as guidance for the safe handling, use, processing, storage, transportation, disposal, and should not be considered as a guarantee or quality specification. The above information is based on data provided by and collected from recognized sources such as distributors, manufacturers, and technical groups and is considered to be accurate to the best of Vigon's knowledge as of the date of this document. It is the responsibility of the user to review all safety information about this product and determine its safety and suitability in their own processes and operations. Appropriate warnings and safe handling procedures should be provided to all handlers and users, taking into account the intended use and the specific conditions and factors relating to such use in accordance with all applicable laws and regulations.

### Revision Information

Physical & Chemical Properties: Multiple Properties  
Transport Information: Material Transportation Information



# MSDS

## MATERIAL SAFETY DATA SHEET

Trade Name: **Epsom Salt, Magnesium Sulfate, U.S.P.**  
Date Prepared: 02/08/2010

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Epsom Salt, Magnesium Sulfate, U.S.P.  
Product description: Magnesium sulfate, heptahydrate  
Manufacturer: PQ Corporation  
P. O. Box 840  
Valley Forge, PA 19482 USA  
Telephone: 610-651-4200  
In case of emergency call: 610-651-4200  
For transportation emergency  
Call CHEMTREC: 800-424-9300

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical and Common Name	CAS Registry Number	Wt. %	OSHA PEL	ACGIH TLV
Magnesium sulfate, heptahydrate; Epsom salt	10034-99-8*	100%	Not Established	Not Established

\* Under the Toxic Substances Control Act (TSCA), hydrates are considered as mixtures of their anhydrous salt and water. Accordingly, the CAS Numbers 7487-88-9, 7732-18-5 are used for purposes of TSCA.

### 3. HAZARDS IDENTIFICATION

<i>Emergency Overview:</i>	White or transparent crystalline odorless powder. Noncombustible. At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated. Causes mild eye irritation.
<i>Eye contact:</i>	Causes mild irritation to the eyes.
<i>Skin contact:</i>	No known adverse effects.
<i>Inhalation:</i>	Causes nausea, vomiting, abdominal cramps, and diarrhea.
<i>Ingestion:</i>	Causes nausea, vomiting, abdominal cramps, and diarrhea.
<i>Chronic hazards:</i>	No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen.
<i>Physical hazards:</i>	Spilled material can be slippery.

### 4. FIRST AID MEASURES

<i>Eye:</i>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
<i>Skin:</i>	Not applicable.
<i>Inhalation:</i>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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Trade Name: **Epsom Salt, Magnesium Sulfate, U.S.P.**  
Date Prepared: 02/08/2010

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*Ingestion:* If large quantities of this material are swallowed, call a physician immediately. Do NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

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#### **5. FIRE FIGHTING MEASURES**

*Flammable limits:* This material is noncombustible.  
*Extinguishing Media:* This material is compatible with all extinguishing media.  
*Hazards to fire-fighters:* See Section 3 for information on hazards when this material is present in the area of a fire.  
*Fire-fighting equipment:* The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: chemical goggles, body-covering protective clothing, self-contained breathing apparatus.

---

#### **6. ACCIDENTAL RELEASE MEASURES**

*Personal protection:* Wear chemical goggles, See section 8.  
*Environmental Hazards:* Sinks and mixes with water. No adverse effects known. Not a listed toxic chemical under SARA Title III, §313 40 CFR Part 372. Not a CERCLA Hazardous Substance under 40 CFR Part 302.  
*Small spill cleanup:* Sweep, scoop or vacuum discharged material. Flush residue with water. Observe environmental regulations.  
*Large spill cleanup:* Keep unnecessary people away; isolate hazard area and deny entry. Do not touch or walk through spilled material. Sweep, scoop or vacuum discharged material. Flush residue with water. Observe environmental regulations.  
*CERCLA RQ:* There is no CERCLA Reportable Quantity for this material.

---

#### **7. HANDLING AND STORAGE**

*Handling:* Avoid breathing dust. Promptly clean up spills.  
*Storage:* Keep containers closed. Protect from extremes of temperature and humidity during storage. Recommended storage conditions 68-110° F and 54-87% relative humidity.

---

#### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

*Engineering controls:* Use with adequate ventilation. Safety shower and eyewash fountain should be within direct access.  
*Respiratory protection:* Use a NIOSH-approved dust respirator where dust occurs. Observe OSHA regulations for respirator use (29 C.F.R. §1910.134)  
*Skin protection:* Wear gloves if abrasion or irritation occurs.  
*Eye protection:* Wear chemical goggles.

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Trade Name: **Epsom Salt, Magnesium Sulfate, U.S.P.**  
Date Prepared: 02/08/2010

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#### **9. PHYSICAL AND CHEMICAL PROPERTIES**

*Appearance:* Crystalline odorless powder.  
*Color:* White or transparent.  
*Odor:* Odorless.  
*pH:* Approximately 6-7  
*Specific gravity:* 1.76 g/cm<sup>3</sup>, Bulk Density Approximately 1.05 g/cm<sup>3</sup>  
*Solubility in water:* 71g/100 ml at 20° C, 91g/100 ml at 40° C

---

#### **10. STABILITY AND REACTIVITY**

*Stability:* This material is stable under all conditions of use and storage.  
*Conditions to avoid:* None.  
*Materials to avoid:* Metal hydrides and other water reactive materials.  
*Hazardous decomposition products:* At very high temperatures, magnesium oxide, sulfur dioxide, and sulfur trioxide may be generated.

---

#### **11. TOXICOLOGICAL INFORMATION**

*Acute Data:* When tested for primary irritation potential, this material caused mild eye irritation. RTECS reports Oral TDL<sub>o</sub>= 428 mg/kg in man 351 mg/kg in women

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#### **12. ECOLOGICAL INFORMATION**

*Eco toxicity:* Data not available.  
*Environmental Fate:* This material is not persistent in aquatic systems and does not contribute to BOD. It does not bioconcentrate up the food chain.  
*Physical/Chemical:* Sinks and mixes with water.

---

#### **13. DISPOSAL CONSIDERATIONS**

*Classification:* Disposed material is not a hazardous waste.  
*Disposal Method:* Landfill according to local, state, and federal regulations. Disposed material is not a RCRA Hazardous waste.

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#### **14. TRANSPORT INFORMATION**

*DOT UN Status:* This material is not regulated hazardous material for transportation.

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#### **15. REGULATORY INFORMATION**

*CERCLA:* No CERCLA Reportable Quantity has been established for this material.  
*SARA TITLE III:* Not an Extremely Hazardous Substance under §302. Not a Toxic Chemical under §313. Hazard Categories under §§311/312: Acute  
*TSCA:* All ingredients of this material are listed on the TSCA inventory.

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*Trade Name:* **Epsom Salt, Magnesium Sulfate, U.S.P.**  
*Date Prepared:* **02/08/2010**

*Page:* **4 of 4**

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*FDA:* **Magnesium sulfate is an FDA GRAS substance pursuant to 21 CFR 184.1443.**

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**16. OTHER INFORMATION**

*Prepared by:* **John G. Blumberg**  
*Supersedes revision of:* **07/24/2006**

**THE INFORMATION ON THIS SAFETY DATA SHEET IS BELIEVED TO BE ACCURATE AND IT IS THE BEST INFORMATION AVAILABLE TO PQ CORPORATION THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONS FOR HANDLING A CHEMICAL BY A PERSON TRAINED IN CHEMICAL HANDLING. PQ CORPORATION MAKES NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED WITH RESPECT TO SUCH INFORMATION OR THE PRODUCT TO WHICH IT RELATES, AND WE ASSUME NO LIABILITY RESULTING FROM THE USE OR HANDLING OF THE PRODUCT TO WHICH THIS SAFETY DATA SHEET RELATES. USERS AND HANDLERS OF THIS PRODUCT SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION PROVIDED HEREIN FOR THEIR OWN PURPOSES.**

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PRODUCT NAME: **ETHYL ALCOHOL (95% VOL)**

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MSDS NO: 1001

EFFECTIVE DATE: FEBRUARY 1, 2011

*Conf*  
*NOV 13/13*

MANUFACTURED BY: **Commercial Alcohols**

Bruce Energy Centre	275 Bloomfield Road	2 Chelsea Lane
4th Concession	Chatham,	Brampton, Ontario
Tiverton, Ontario	Ontario	L6T 3Y4
NOG 2T0	N7M 5J5	

EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666

NON-EMERGENCY INFORMATION PHONE NUMBER: (905) 790-7500

**TRANSPORTATION**

PRIMARY CLASS:	3	CLASS NAME:	FLAMMABLE LIQUID	UN#:	1170
SUBSIDIARY CLASS:	NONE				
SHIPPING NAME:	ETHANOL				

**I. EMERGENCY AND FIRST AID PROCEDURE**

<b><u>INGESTION</u></b>	<ul style="list-style-type: none"> <li>• Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing.</li> <li>• DO NOT INDUCE VOMITING.</li> <li>• Have victim drink about 250ml (8fl. oz.) of water to dilute material in stomach.</li> <li>• If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration.</li> <li>• Seek medical assistance.</li> </ul>
<b><u>SKIN</u></b>	<ul style="list-style-type: none"> <li>• Flush contaminated area with water for at least 20 minutes.</li> <li>• Remove contaminated clothing under running water.</li> <li>• Completely decontaminate clothing before re-use, or discard.</li> <li>• If irritation occurs seek medical attention.</li> </ul>
<b><u>INHALATION</u></b>	<ul style="list-style-type: none"> <li>• Remove victim to fresh air.</li> <li>• Artificial respiration should be given if breathing has stopped and cardiopulmonary resuscitation if heart has stopped.</li> <li>• Oxygen may be given if necessary.</li> <li>• Seek medical attention immediately.</li> </ul>
<b><u>EYES</u></b>	<ul style="list-style-type: none"> <li>• Immediately flush eyes with water for at least 20 minutes, holding the eyelids open.</li> <li>• Seek medical attention immediately.</li> </ul>
<b><u>NOTES TO PHYSICIAN</u></b>	<ul style="list-style-type: none"> <li>• Symptoms of ethanol intoxication vary with the alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05-0.15% and approximately 25% of individuals will show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol and 50-95% of individuals at this level are clinically intoxicated. Severe poisoning occurs when the blood ethanol level is 0.3-0.5%. Above 0.5% the individual will be comatose and death can occur.</li> <li>• The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration.</li> <li>• Avoid the use of depressant drugs or the excessive administration of fluids.</li> </ul>

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 INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN.



<b>PRODUCT NAME:</b> ETHYL ALCOHOL (95% VOL)	Page 2 of 6
<b>MSDS NO:</b> 1001	<b>EFFECTIVE DATE:</b> FEBRUARY 1, 2011

## II. FIRE AND EXPLOSION HAZARD DATA

<b>FLASH POINT, °C</b>	<ul style="list-style-type: none"> <li>16 (Tag closed cup, ASTM D-56)</li> </ul>																							
<b>OTHER IMPORTANT DATA</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">COMPONENT</th> <th rowspan="2">% V/V</th> <th colspan="2">FLAMMABLE LIMITS, % V/V</th> <th rowspan="2">VAPOUR PRESSURE KPA AT 20°C</th> <th rowspan="2">VAPOUR DENSITY (AIR = 1)</th> <th rowspan="2">AUTOIGNITION POINT, °C</th> </tr> <tr> <th>LOWER</th> <th>UPPER</th> </tr> </thead> <tbody> <tr> <td>(1) Ethyl Alcohol</td> <td>95.0</td> <td>3.3</td> <td>19.0</td> <td>5.87</td> <td>1.6</td> <td>422</td> </tr> <tr> <td>Water</td> <td>Balance</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	COMPONENT	% V/V	FLAMMABLE LIMITS, % V/V		VAPOUR PRESSURE KPA AT 20°C	VAPOUR DENSITY (AIR = 1)	AUTOIGNITION POINT, °C	LOWER	UPPER	(1) Ethyl Alcohol	95.0	3.3	19.0	5.87	1.6	422	Water	Balance					
COMPONENT	% V/V			FLAMMABLE LIMITS, % V/V					VAPOUR PRESSURE KPA AT 20°C	VAPOUR DENSITY (AIR = 1)	AUTOIGNITION POINT, °C													
		LOWER	UPPER																					
(1) Ethyl Alcohol	95.0	3.3	19.0	5.87	1.6	422																		
Water	Balance																							
<b>EXTINGUISHING MEDIA</b>	<ul style="list-style-type: none"> <li>Apply alcohol-type or all-purpose-type foams by manufacturers' recommended techniques for large fires.</li> <li>Use carbon dioxide or dry chemical media for small fires.</li> <li>Water is generally unsuitable and may help to spread the fire.</li> </ul>																							
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	<ul style="list-style-type: none"> <li>Use water spray to cool fire-exposed containers and structures.</li> <li>Use water spray to disperse vapours; reignition is possible.</li> <li>Use self-contained breathing apparatus and protective clothing.</li> </ul>																							
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>	<ul style="list-style-type: none"> <li>Vapours form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from handling point.</li> </ul>																							

## III. IDENTIFICATION

<b>CHEMICAL NAME</b>	ETHYL ALCOHOL (95% vol)	<b>CHEMICAL FAMILY</b>	ALCOHOLS
<b>FORMULA</b>	(1) CH <sub>3</sub> - CH <sub>2</sub> - OH	<b>MOLECULAR WEIGHT</b>	(1) 46.07
<b>SYNONYMS</b>	<ul style="list-style-type: none"> <li>Ethanol, Alcohol, Ethyl Alcohol 190 proof, Ethyl Alcohol DPS (95% vol), Ethyl Alcohol DS (95% vol), Ethyl Alcohol VS (95% vol).</li> </ul>		
<b>USE</b>	<ul style="list-style-type: none"> <li>General purpose organic solvent, aerosols, cosmetics, pharmaceuticals, alcoholic beverages, vinegar production, etc.</li> </ul>		



PRODUCT NAME: ETHYL ALCOHOL (95% VOL)

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MSDS NO: 1001

EFFECTIVE DATE: FEBRUARY 1, 2011

**IV. PHYSICAL DATA**

BOILING POINT, °C at 760mm Hg	78.3
FREEZING POINT, °C	Not Available
DENSITY, kg/L @ 20°C	0.8101
COEFFICIENT OF WATER/OIL DISTRIBUTION	Separates from oil
pH	Not applicable
DISTILLATION RANGE, °C	78.0 - 79.0
MISCIBILITY IN WATER	Complete
% VOLATILES BY VOLUME	100
EVAPORATION RATE (butyl acetate = 1)	1.7

**APPEARANCE AND ODOUR**

- Colourless liquid with typical lower alcohol odour.
- Odour threshold is in the range of 0.1 to 5100 ppm, according to the Canadian Standards Association publication Z94.4-M1982 (Appendix 1).

**V. INGREDIENTS AND TOXICOLOGICAL DATA**

INGREDIENT	% V/V	CAS NO.	TLV, ppm	LC50, ppm/4h.	LD50, mg/kg	LD50, mg/kg
				RAT, INHAL.	RAT, ORAL	RABBIT, SKIN
(1) Ethyl Alcohol	95.0	64-17-5	1000	31,623	7,060	20,000
Water	Balance					

**REFERENCES:** ACGIH (1988-1989), RTECS (1983).

**VI. WHMIS CLASSIFICATION AND SYNERGISTIC MATERIALS**

**WHMIS CLASSIFICATION**

- Flammable liquid, eye irritant.

**SYNERGISTIC MATERIALS**

- Carbon tetrachloride, chloroform, bromotrichloromethane, dimethylnitrosamine,



<b>PRODUCT NAME:</b> ETHYL ALCOHOL (95% VOL)	Page 4 of 6
<b>MSDS NO:</b> 1001	<b>EFFECTIVE DATE:</b> FEBRUARY 1, 2011

**VII. HEALTH HAZARD DATA**

<b><u>INGESTION</u></b>	<ul style="list-style-type: none"> <li>• May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma.</li> </ul>
<b><u>SKIN ABSORPTION</u></b>	<ul style="list-style-type: none"> <li>• No adverse effects with normal skin. However, potentially harmful amounts of material may be absorbed across markedly abraded skin when contact is sustained, particularly in children.</li> </ul>
<b><u>INHALATION</u></b>	<ul style="list-style-type: none"> <li>• High vapour concentrations may cause a burning sensation in the throat and nose, stinging and watering in the eyes. At concentrations which cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may occur.</li> </ul>
<b><u>SKIN CONTACT</u></b>	<ul style="list-style-type: none"> <li>• No evidence of adverse effects from available information.</li> </ul>
<b><u>EYE CONTACT</u></b>	<ul style="list-style-type: none"> <li>• Severe eye irritant.</li> <li>• Vapours can irritate eyes.</li> <li>• Eye damage from contact with liquid is reversible and proper treatment will result in healing within a few days.</li> <li>• Damage is usually mild to moderate conjunctivitis, seen mainly as redness of the conjunctiva.</li> </ul>
<b><u>EFFECT OF REPEATED OVEREXPOSURE</u></b>	<ul style="list-style-type: none"> <li>• Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.</li> </ul>
<b><u>MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE</u></b>	<ul style="list-style-type: none"> <li>• Repeated exposure to ethanol may exacerbate liver injury produced from other causes.</li> </ul>
<b><u>OTHER EFFECTS OF OVEREXPOSURE</u></b>	<ul style="list-style-type: none"> <li>• Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders, and small size head.</li> </ul>



PRODUCT NAME: ETHYL ALCOHOL (95% VOL)

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**VIII. REACTIVITY DATA**

<u>STABILITY</u>	<ul style="list-style-type: none"> <li>Stable</li> </ul>
<u>CONDITIONS TO AVOID</u>	<ul style="list-style-type: none"> <li>Sources of ignition</li> </ul>
<u>INCOMPATIBILITY</u>	<ul style="list-style-type: none"> <li>Oxidizing materials</li> </ul>
<u>HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS</u>	<ul style="list-style-type: none"> <li>Burning can produce carbon monoxide and/or carbon dioxide and/or formaldehyde.</li> </ul>
<u>HAZARDOUS POLYMERIZATION</u>	<ul style="list-style-type: none"> <li>Will not occur</li> </ul>
<u>CONDITIONS TO AVOID</u>	<ul style="list-style-type: none"> <li>None currently known</li> </ul>

**IX. SPILL OR LEAK PROCEDURES**

<u>SPILL</u>	<ul style="list-style-type: none"> <li>Contain spilled material.</li> <li>Provide adequate ventilation and protective equipment.</li> <li>Remove sources of heat, sparks or flames.</li> <li>Spill should be collected in suitable containers or absorbed on a suitable absorbent material for subsequent disposal.</li> </ul>
<u>WASTE DISPOSAL</u>	<ul style="list-style-type: none"> <li>Waste material should be disposed of in an approved incinerator or in a designated landfill site, in compliance with all federal, provincial and local government regulations.</li> </ul>

**X. SPECIAL PROTECTION INFORMATION**

<u>RESPIRATORY PROTECTION</u>	<ul style="list-style-type: none"> <li>Up to 1000 ppm, an approved organic vapour cartridge respirator can be used.</li> <li>For concentrations above 1000 ppm, an air-supplying respirator is recommended.</li> <li>The user should consult a respirator guide, such as the Canadian Standards Association's guide Z94.4-M1982.</li> </ul>
<u>VENTILATION</u>	<ul style="list-style-type: none"> <li>The ventilation system should be non-sparking, grounded and separate from other exhaust ventilation systems.</li> <li>Local ventilation is recommended when handling.</li> </ul>
<u>PROTECTIVE GLOVES</u>	<ul style="list-style-type: none"> <li>Neoprene, butyl or natural rubber.</li> </ul>
<u>EYE PROTECTION</u>	<ul style="list-style-type: none"> <li>Chemical resistant monogoggles when handling</li> </ul>
<u>OTHER PROTECTIVE EQUIPMENT</u>	<ul style="list-style-type: none"> <li>Eye bath, safety shower and other protective equipment as required.</li> </ul>



PRODUCT NAME: ETHYL ALCOHOL (95% VOL)

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### XI. SPECIAL PRECAUTIONS

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

- Keep away from heat, sparks and flames.
- Keep container closed when not in use.
- Use with adequate ventilation.
- Avoid breathing vapours.
- Avoid contact with eyes and skin.
- Wash exposed skin thoroughly after handling.
- Take precautions to prevent static electricity build-up when transferring contents.

**OTHER PRECAUTIONS**

- Good personal hygiene practices are suggested, such as abstaining from eating, drinking and smoking in the workplace.

### XII. MSDS PREPARATION

PREPARED BY Alcohol Quality Assurance, Technical Services and Regulatory Affairs Department

PHONE NUMBER (905) 790-7500

DATE: FEBRUARY 1, 2011

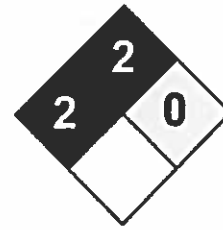
COMMERCIAL ALCOHOLS URGES EACH CUSTOMER OR RECIPIENT OF THIS MSDS TO STUDY IT CAREFULLY TO BECOME AWARE OF AND UNDERSTAND THE HAZARDS ASSOCIATED WITH THE PRODUCT. THE READER SHOULD CONSIDER CONSULTING REFERENCE WORKS OR INDIVIDUALS WHO ARE EXPERTS IN VENTILATION, TOXICOLOGY OR FIRE PREVENTION, AS NECESSARY OR APPROPRIATE TO USE AND UNDERSTAND THE DATA CONTAINED IN THIS MSDS.

TO PROMOTE SAFE USE AND HANDLING OF THIS PRODUCT, EACH CUSTOMER OR RECIPIENT SHOULD

- (1) NOTIFY EMPLOYEES, AGENTS, CONTRACTORS AND OTHERS WHO MAY USE THIS MATERIAL, OF THE INFORMATION IN THIS MSDS AND ANY OTHER INFORMATION REGARDING HAZARDS OR SAFETY,
- (2) FURNISH THIS SAME INFORMATION TO EACH CUSTOMER FOR THE PRODUCT, AND
- (3) REQUEST CUSTOMERS TO NOTIFY THEIR EMPLOYEES, CUSTOMERS, AND OTHER USERS OF THE PRODUCT OF THIS INFORMATION.



*Nov 2013 Copy*



Health	2
Fire	2
Reactivity	0
Personal Protection	H

## Material Safety Data Sheet Eucalyptus oil MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Eucalyptus oil  
**Catalog Codes:** SLE2047  
**CAS#:** 8000-48-4  
**RTECS:** LE2530000  
**TSCA:** TSCA 8(b) inventory: Eucalyptus oil  
**CI#:** Not available.  
**Synonym:**  
**Chemical Name:** Not available.  
**Chemical Formula:** Not available.

**Contact Information:**  
**Sciencelab.com, Inc.**  
 14025 Smith Rd.  
 Houston, Texas 77396  
**US Sales: 1-800-901-7247**  
**International Sales: 1-281-441-4400**  
**Order Online: ScienceLab.com**  
**CHEMTREC (24HR Emergency Telephone), call:**  
 1-800-424-9300  
**International CHEMTREC, call: 1-703-527-3887**  
**For non-emergency assistance, call: 1-281-441-4400**

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Eucalyptus oil	8000-48-4	100

**Toxicological Data on Ingredients:** Eucalyptus oil: ORAL (LD50): Acute: 2480 mg/kg [Rat].

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Hazardous in case of skin contact (permeator), of ingestion. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Potential Chronic Health Effects:**

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Hazardous in case of skin contact (permeator), of ingestion. **CARCINOGENIC EFFECTS:** Not available. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance is toxic to lungs. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation.

### Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** CLOSED CUP: 44°C (111.2°F).

**Flammable Limits:** Not available.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

Flammable liquid, insoluble in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:** Absorb with an inert material and put the spilled material in an appropriate waste disposal.

**Large Spill:**

Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

### Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

**Storage:**

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Personal Protection:**

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not available.

**Color:** Not available.

**pH (1% soln/water):** Not applicable.

**Boiling Point:** Not available.

**Melting Point:** Not available.

**Critical Temperature:** Not available.

**Specific Gravity:** 0.915 (Water = 1)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (In Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol.

**Solubility:**

Partially soluble in methanol. Insoluble in cold water.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

### Section 11: Toxicological Information

**Routes of Entry:** Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 2480 mg/kg [Rat].

**Chronic Effects on Humans:** The substance is toxic to lungs.

**Other Toxic Effects on Humans:**

Very hazardous in case of skin contact (irritant), of inhalation. Hazardous in case of skin contact (permeator), of ingestion.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** CLASS 3: Combustible liquid with a flash point greater than 37.8C (100F).

**Identification:** : Flammable liquids n.o.s. : UN1993 PG: Not available.

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory: Eucalyptus oil

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):**

R10- Flammable. R38- Irritating to skin. R41- Risk of serious damage to eyes.

**HMIS (U.S.A.):**

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

**National Fire Protection Association (U.S.A.):**

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

**Protective Equipment:**

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/09/2005 05:31 PM

**Last Updated:** 05/21/2013 12:00 PM

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## Material Safety Data Sheet

Version 5.0  
 Revision Date 03/01/2013  
 Print Date 11/13/2013

*Nov 13/13 Conf*

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : **Fennel oil**

Product Number : W248207  
 Brand : Aldrich  
 Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada Co.  
 2149 Winston Park Drive  
 OAKVILLE ON L6H 6J8  
 CANADA

Manufacturer : Sigma-Aldrich Corporation  
 3050 Spruce St.  
 St. Louis, Missouri 63103  
 USA

Telephone : +1 9058299500  
 Fax : +1 9058299292  
 Emergency Phone # (For both supplier and manufacturer) : 1-800-424-9300

Preparation Information : Sigma-Aldrich Corporation  
 Product Safety - Americas Region  
 1-800-521-8956

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### WHMIS Classification

B3	Combustible Liquid	Combustible Liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant

#### GHS Classification

Flammable liquids (Category 3)  
 Acute toxicity, Oral (Category 5)  
 Skin irritation (Category 2)

#### GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)  
 H226 : Flammable liquid and vapour.  
 H303 : May be harmful if swallowed.  
 H315 : Causes skin irritation.

Precautionary statement(s) : none

#### HMIS Classification

Health hazard: 2  
 Flammability: 2  
 Physical hazards: 0

#### Potential Health Effects

**Inhalation** : May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin** : May be harmful if absorbed through skin. Causes skin irritation.  
**Eyes** : Causes eye irritation.

Ingestion

May be harmful if swallowed.

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Fennel oil, sweet  
Foeniculum Vulcare Mill.

CAS-No.	EC-No.	Index-No.	Concentration
<b>Bitter fennel oil</b>			
8006-84-6	-	-	-

---

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

---

### 5. FIREFIGHTING MEASURES

#### Conditions of flammability

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

#### Suitable extinguishing media

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.

#### Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

#### Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

#### Explosion data - sensitivity to mechanical impact

no data available

#### Explosion data - sensitivity to static discharge

no data available

#### Further information

Use water spray to cool unopened containers.

---

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. 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.

**Methods and materials for containment and cleaning up**

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).

---

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

**Conditions for safe storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

---

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**Personal protective equipment****Respiratory protection**

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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Specific engineering controls**

Use mechanical exhaust or laboratory fumehood to avoid exposure.

---

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	liquid
Colour	colourless

**Safety data**

pH	no data available
Melting point/freezing point	Melting point/range: 5 °C (41 °F) - lit.
Boiling point	227 °C (441 °F) - lit.
Flash point	60 °C (140 °F) - closed cup
Ignition temperature	no data available
Auto-ignition temperature	no data available



Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	0.963 g/cm <sup>3</sup> at 25 °C (77 °F)
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

---

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

no data available

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

Other decomposition products - no data available

---

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Oral LD50

LD50 Oral - rat - 3,120 mg/kg

#### Inhalation LC50

no data available

#### Dermal LD50

no data available

#### Other information on acute toxicity

no data available

### Skin corrosion/irritation

Skin - mouse -

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitisation

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

### Germ cell mutagenicity

no data available

### Carcinogenicity

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

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

**Reproductive toxicity**

no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**

no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**

no data available

**Aspiration hazard**

no data available

**Potential health effects**

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

**Signs and Symptoms of Exposure**

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Dermatitis, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**

no data available

**Additional Information**

RTECS: LJ2550000

---

**12. ECOLOGICAL INFORMATION**

**Toxicity**

no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

no data available

---

**13. DISPOSAL CONSIDERATIONS**

**Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

---

**14. TRANSPORT INFORMATION****DOT (US)**

UN number: 1993 Class: 3 Packing group: III  
Proper shipping name: Flammable liquids, n.o.s. (Bitter fennel oil)  
Marine pollutant: No  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1993 Class: 3 Packing group: III EMS-No: F-E, S-E  
Proper shipping name: FLAMMABLE LIQUID, N.O.S. (Bitter fennel oil)  
Marine pollutant: No

**IATA**

UN number: 1993 Class: 3 Packing group: III  
Proper shipping name: Flammable liquid, n.o.s. (Bitter fennel oil)

---

**15. REGULATORY INFORMATION****WHMIS Classification**

B3	Combustible Liquid	Combustible Liquid
D2B	Toxic Material Causing Other Toxic Effects	Moderate skin irritant

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

---

**16. OTHER INFORMATION****Text of H-code(s) and R-phrase(s) mentioned in Section 3****Further Information**

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<http://www.agilexfragrances.com>

# EU Safety Data Sheet

Created By: Regulatory Affairs Group  
RegAffairs-Fragrance@Agilexfragrances.com

Product: **Eucalyptus Spearmint**  
Product#: **5139731**  
SKU#: **5270110083**

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JUN 10 2014

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2014-05-23

## 1. Chemical Product and Company Identification

---

Trade Name: Eucalyptus Spearmint; SKU#: 5270110083; Product# 5139731  
Product Use: Fragrance for Consumer product  
Manufacturer: Agilex Fragrances  
140 Centennial Ave  
Piscataway, NJ 08854 USA  
(800) 542-7662 FAX 732-393-7379  
<http://www.agilexfragrances.com>

Emergency Telephone Number(s):  
(800) 255-3924 Domestic USA, Canada, Puerto Rico, and US Virgin Islands  
(813) 248-0585 International

## 2. Hazards Identification

---

General: Fragrance composition. When undiluted and not properly handled, can be irritating to the skin and eyes and upon inhalation. Combustible material that can sustain a fire.

Hazard Symbol: N, Dangerous for the Environment  
Xi, Irritant  
Xn, Harmful

Risk Phrases: R38, Irritating to skin  
R43, May cause sensitization by skin contact  
R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
R65, Harmful: may cause lung damage if swallowed

Safety Phrases: S24, Avoid contact with skin  
S37, Wear suitable gloves  
S61, Avoid release to the environment. Refer to special instructions/safety data sheet  
S62, If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label



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# EU Safety Data Sheet

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Product: **Eucalyptus Spearmint**  
 Product#: **5139731**  
 SKU#: **5270110083**

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 2014-05-23

### 3. Composition/Information on Ingredients

Chemical Identification: Eucalyptus Spearmint; SKU#: 5270110083; Product# 5139731

CAS Number: Not Applicable, product is a mixture

EINECS Number: Not Applicable, product is a mixture

This product is a complex mixture of fragrance ingredients, which contains among others the following substance(s), presenting a health or environmental hazard within the meaning of Directive 67/548/EEC, or having an occupational Exposure Limit:

CAS #	EINECS/ ELINCS#	Classification	Conc. Range	Ingredient(s)
8000-48-4	283-406-2	R10 N - R51/53 Xi - R43 Xn - R65	30 - 40 %	Eucalyptus globulus leaf oil
6485-40-1	229-352-5	Xi - R43	20 - 30 %	I-Carvone
68647-72-3	232-433-8	R10 N - R50/53 Xi - R38, R43 Xn - R65	20 - 30 %	Citrus aurantium var. dulcis
68917-18-0	290-058-5	N - R51/53 Xi - R38, R43 Xn - R22	10 - 20 %	Mentha arvensis leaf oil
8006-90-4	282-015-4	N - R51/53 Xi - R38, R43	2 - 5 %	Mentha piperita (Peppermint) oil
5989-27-5	227-813-5	R10 N - R50/53 Xi - R38, R43 Xn - R65	1 - 2 %	Limonene

### 4. First Aid Measures

Inhalation: Remove from exposure site to fresh air and keep at rest.  
 Obtain medical advice.

Eye Exposure: Flush immediately with water for at least 15 minutes.  
 Contact physician if symptoms persist.

Skin Exposure: Remove contaminated clothes. Wash thoroughly with water (and soap).  
 Contact physician if symptoms persist.

Ingestion: Rinse mouth with water and obtain medical advice.

Others: Take risk and safety phrases (section 15) into account.

### 5. Fire-Fighting measures

Extinguishing Media: Carbon dioxide, dry chemical, foam.  
 Do not use a direct water jet on burning material.



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## EU Safety Data Sheet

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Product: **Eucalyptus Spearmint**  
Product#: **5139731**  
SKU#: **5270110083**

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### 6. Accidental Release Measures

---

**Personal precautions:** Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

**Spillage:** Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapors. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

**Environmental** Keep away from drains, soil, and surface and groundwater.

### 7. Handling and Storage

---

**Handling:** Apply according to good manufacturing and industrial hygiene practices with proper ventilation. Do not drink, eat or smoke while handling. Respect good personal hygiene.

**Storage:** Store in a cool, dry and ventilated area away from heat sources and protected from light in tightly closed original container. Avoid plastic and uncoated metal container. Keep air contact to a minimum.

**Fire protection:** Keep away from ignition sources and naked flame.

### 8. Exposure Controls/Personal Protection

---

**Respiratory Protection:** Avoid excessive inhalation of concentrated vapors. Apply local ventilation where appropriate.

**Eye Protection:** Use goggles.

**Skin Protection:** Avoid Skin contact. Use chemically resistant gloves as needed.

Ingredients(s) with EU occupational exposure limit:  
None to be reported

### 9. Physical and Chemical Properties

---

**Appearance:** Conforms to Standard

**Odor:** Conforms to Standard

**Color:** Colorless to Yellow Tint

**Viscosity:** Liquid

**Freezing Point:** Not determined

**Boiling Point:** Not determined

**Melting Point:** Not determined

**Flashpoint:** 134 F (56.67 C)

**Auto flammability:** Not determined

**Explosive Properties:** None Expected

**Oxidizing properties:** None Expected

**Vapor Pressure** 0.785

**%VOC:** 60

**Specific Gravity @ 25** 0.9165

**Density @ 25 C:** 0.9135

**Refractive Index @ 25** 1.4785

**Soluble in:** Oil

### 10. Stability and Reactivity

---

**Reactivity:** Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

**Decomposition:** Carbon monoxide and unidentified organic compounds may be formed during combustion.



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# EU Safety Data Sheet

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Product: **Eucalyptus Spearmint**  
 Product#: **5139731**  
 SKU#: **5270110083**

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 2014-05-23

## 11. Toxicological Information

Based on the ingredients in this preparation and their concentrations according to the conventional method of Directive 99/45/EC classified as:

### R38, Irritating to skin

68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
------------	-----------	-----------	------------------------------

### R43, May cause sensitization by skin contact

8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
6485-40-1	229-352-5	20 - 30 %	I-Carvone
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
68917-18-0	290-058-5	10 - 20 %	Mentha arvensis leaf oil
8006-90-4	282-015-4	2 - 5 %	Mentha piperita (Peppermint) oil
5989-27-5	227-813-5	1 - 2 %	Limonene

### R65, Harmful: may cause lung damage if swallowed

8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis

## 12. Ecological Information

Based on the ingredients in this preparation and their concentrations according to the conventional method of Directive 99/45/EC classified as:

### R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis

## 13. Disposal Conditions

Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.

## 14. Transport Information

Ingredient of greatest environmental impact: 68647-72-3 Citrus aurantium var. dulcis

Regulator		Class	Pack Group	Sub Risk	UN-nr.
<b>U.S. DOT (Non-Bulk)</b>		Not Regulated - Not Dangerous Goods			
Chemicals NOI					
<b>ADR/RID (International Road/Rail)</b>					
Environmentally Hazardous	Substance,	9	III		UN3082
Liquid, n.o.s.					
<b>IATA (Air Cargo)</b>					
Perfumery Products		3	III	Flammable Liquid	UN1266
Environmentally Hazardous	Substance,	9	III		UN3082
Liquid, n.o.s.					
<b>IMDG (Sea)</b>					
Perfumery Products		3	III	Flammable Liquid	UN1266
Environmentally Hazardous	Substance,	9	III		UN3082
Liquid, n.o.s.					



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Product: **Eucalyptus Spearmint**  
 Product#: **5139731**  
 SKU#: **5270110083**

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## 15. Regulatory Information

Classification Packaging/Labeling: Directive 92/32/EC

Hazard Symbol: N, Dangerous for the Environment  
 Xi, Irritant  
 Xn, Harmful

Risk Phrases: R38, Irritating to skin  
 R43, May cause sensitization by skin contact  
 R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment  
 R65, Harmful: may cause lung damage if swallowed

Safety Phrases: S24, Avoid contact with skin  
 S37, Wear suitable gloves  
 S61, Avoid release to the environment. Refer to special instructions/safety data sheet  
 S62, If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

### Contains:

8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
8000-48-4	283-406-2	30 - 40 %	Eucalyptus globulus leaf oil
6485-40-1	229-352-5	20 - 30 %	l-Carvone
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
68647-72-3	232-433-8	20 - 30 %	Citrus aurantium var. dulcis
68917-18-0	290-058-5	10 - 20 %	Mentha arvensis leaf oil
8006-90-4	282-015-4	2 - 5 %	Mentha piperita (Peppermint) oil
5989-27-5	227-813-5	1 - 2 %	Limonene





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# EU Safety Data Sheet

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Product: **Eucalyptus Spearmint**  
 Product#: **5139731**  
 SKU#: **5270110083**

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## 16. Other Information

*Total Fractional Values (TFV) as recommended by EFFA*

TFV	Hazard Symbol	Risk Code	Risk Phrase
0.68	Xn	R22	Harmful if swallowed
1.73	Xi	R38	Irritating to skin
30.00	Xi	R43	May cause sensitization by skin contact
0.86	N	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
10.60	N	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
5.16	Xn	R65	Harmful: may cause lung damage if swallowed

### Remarks

According to directive 2001/58/EC the information in this safety data sheet is based on the properties of the material known to Agilex Flavors & Fragrances™ at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment Agilex Flavors & Fragrances™ holds no responsibility. This document is not intended for quality assurance purposes.



# EU Safety Data Sheet

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Product: **Rose**  
Product#: 21813  
SKU#: 6270110047

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*Nov 13/13 CCJ*

## 1. Chemical Product and Company Identification

---

Trade Name: Rose; SKU#: 6270110047; Product# 21813  
Product Use: Fragrance for Consumer product  
Manufacturer: Agilex Flavors & Fragrances  
140 Centennial Ave  
Piscataway, NJ 08854 USA  
(800) 542-7662 FAX 732-393-7379  
<http://www.agilexfragrances.com>

Emergency Telephone Number(s):  
(800) 255-3924 Domestic USA, Canada, Puerto Rico, and US Virgin Islands  
(813) 248-0585 International

## 2. Hazards Identification

---

General: Fragrance composition. When undiluted and not properly handled, can be irritating to the skin and eyes and upon inhalation. Combustible material that can sustain a fire.

Hazard Symbol: N, Dangerous for the Environment  
Xi, Irritant

Risk Phrases: R38, Irritating to skin  
R41, Risk of serious damage to eyes  
R43, May cause sensitization by skin contact  
R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety Phrases: S24, Avoid contact with skin  
S26, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S37, Wear suitable gloves  
S39, Wear eye/face protection  
S61, Avoid release to the environment. Refer to special instructions/safety data sheet



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# EU Safety Data Sheet

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RegAffairs-Fragrance@Agilexfandf.com

Product: **Rose**  
Product#: **21813**  
SKU#: **6270110047**

Page 2 of 5  
2013-11-13

### 3. Composition/Information on Ingredients

---

Chemical Identification: Rose; SKU#: 6270110047; Product# 21813

CAS Number: Not Applicable, product is a mixture

EINECS Number: Not Applicable, product is a mixture

This product is a complex mixture of fragrance ingredients, which contains among others the following substance(s), presenting a health or environmental hazard within the meaning of Directive 67/548/EEC, or having an occupational Exposure Limit:

CAS #	EINECS/ ELINCS#	Classification	Conc. Range	Ingredient(s)
106-22-9	203-375-0	N - R51/53 Xi - R38, R43	10 - 20 %	Citronellol
106-24-1	203-377-1	Xi - R38, R41, R43	5 - 10 %	Geraniol
118-58-1	204-262-9	N - R51/53 Xi - R43	5 - 10 %	Benzyl Salicylate
6812-78-8	229-887-4	N - R51/53 Xi - R38, R41, R43	2 - 5 %	Rhodinol
122-40-7	204-541-5	N - R51/53 Xi - R43	2 - 5 %	Amyl Cinnamal
107-75-5	203-518-7	Xi - R36, R43	2 - 5 %	Hydroxycitronellal
6259-76-3	228-408-6	N - R50/53 Xi - R38, R43	1 - 2 %	Hexyl salicylate
65405-77-8	265-745-8	N - R50/53 Xi - R43	1 - 2 %	cis-3-Hexenyl salicylate

### 4. First Aid Measures

---

Inhalation: Remove from exposure site to fresh air and keep at rest.  
Obtain medical advice.

Eye Exposure: Flush immediately with water for at least 15 minutes.  
Contact physician if symptoms persist.

Skin Exposure: Remove contaminated clothes. Wash thoroughly with water (and soap).  
Contact physician if symptoms persist.

Ingestion: Rinse mouth with water and obtain medical advice.

Others: Take risk and safety phrases (section 15) into account.

### 5. Fire-Fighting measures

---

Extinguishing Media: Carbon dioxide, dry chemical, foam.  
Do not use a direct water jet on burning material.

### 6. Accidental Release Measures

---

Personal precautions: Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

Spillage: Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapors. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

Environmental: Keep away from drains, soil, and surface and groundwater.



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## EU Safety Data Sheet

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Product: **Rose**  
Product#: **21813**  
SKU#: **6270110047**

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2013-11-13

### 7. Handling and Storage

---

**Handling:** Apply according to good manufacturing and industrial hygiene practices with proper ventilation. Do not drink, eat or smoke while handling. Respect good personal hygiene.

**Storage:** Store in a cool, dry and ventilated area away from heat sources and protected from light in tightly closed original container. Avoid plastic and uncoated metal container. Keep air contact to a minimum.

**Fire protection:** Keep away from ignition sources and naked flame.

### 8. Exposure Controls/Personal Protection

---

**Respiratory Protection:** Avoid excessive inhalation of concentrated vapors. Apply local ventilation where appropriate.

**Eye Protection:** Use goggles.

**Skin Protection:** Avoid Skin contact. Use chemically resistant gloves as needed.

Ingredients(s) with EU occupational exposure limit:  
None to be reported

### 9. Physical and Chemical Properties

---

**Appearance:** Conforms to Standard

**Odor:** Conforms to Standard

**Color:** Yellow Tint

**Viscosity:** Liquid

**Freezing Point:** Not determined

**Boiling Point:** Not determined

**Melting Point:** Not determined

**Flashpoint:** >200 F (93.33 C)

**Auto flammability:** Not determined

**Explosive Properties:** None Expected

**Oxidizing properties:** None Expected

**Vapor Pressure** 0.0206

**%VOC:** 3.3742

**Specific Gravity @ 25** 0.9785

**Density @ 25 C:** 0.9755

**Refractive Index @ 25** 1.4845

**Soluble in:** Oil

### 10. Stability and Reactivity

---

**Reactivity:** Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.

**Decomposition:** Carbon monoxide and unidentified organic compounds may be formed during combustion.



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Product: **Rose**  
 Product#: **21813**  
 SKU#: **6270110047**

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 2013-11-13

## 11. Toxicological Information

Based on the ingredients in this preparation and their concentrations according to the conventional method of Directive 99/45/EC classified as:

R38, Irritating to skin	None	No single ingredient of significant concentration
R41, Risk of serious damage to eyes	None	No single ingredient of significant concentration
R43, May cause sensitization by skin contact		
106-22-9	203-375-0	10 - 20 % Citronellol
106-24-1	203-377-1	5 - 10 % Geraniol
118-58-1	204-262-9	5 - 10 % Benzyl Salicylate
6812-78-8	229-887-4	2 - 5 % Rhodinol
122-40-7	204-541-5	2 - 5 % Amyl Cinnamal
107-75-5	203-518-7	2 - 5 % Hydroxycitronellal
6259-76-3	228-408-6	1 - 2 % Hexyl salicylate
65405-77-8	265-745-8	1 - 2 % cis-3-Hexenyl salicylate

## 12. Ecological Information

Based on the ingredients in this preparation and their concentrations according to the conventional method of Directive 99/45/EC classified as:

R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment	None	No single ingredient of significant concentration
--	------	---

## 13. Disposal Conditions

Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.

## 14. Transport Information

Ingredient of greatest environmental impact: 65405-77-8 cis-3-Hexenyl salicylate

Regulator	Class	Pack Group	Sub Risk	UN-nr.
<b>U.S. DOT (Non-Bulk)</b>	Not Regulated - Not Dangerous Goods			
Chemicals NOI				
<b>ADR/RID (International Road/Rail)</b>				
Environmentally Hazardous Substance, Liquid, n.o.s.	9	III		UN3082
<b>IATA (Air Cargo)</b>				
Environmentally Hazardous Substance, Liquid, n.o.s.	9	III		UN3082
<b>IMDG (Sea)</b>				
Environmentally Hazardous Substance, Liquid, n.o.s.	9	III		UN3082



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Product: **Rose**  
Product#: **21813**  
SKU#: **6270110047**

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2013-11-13

## 15. Regulatory Information

Classification Packaging/Labeling: Directive 92/32/EC

Hazard Symbol: N, Dangerous for the Environment  
Xi, Irritant

Risk Phrases: R38, Irritating to skin  
R41, Risk of serious damage to eyes  
R43, May cause sensitization by skin contact  
R51/53, Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Safety Phrases: S24, Avoid contact with skin  
S26, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S37, Wear suitable gloves  
S39, Wear eye/face protection  
S61, Avoid release to the environment. Refer to special instructions/safety data sheet

### Contains:

106-22-9	203-375-0	10 - 20 %	Citronellol
106-24-1	203-377-1	5 - 10 %	Geraniol
118-58-1	204-262-9	5 - 10 %	Benzyl Salicylate
6812-78-8	229-887-4	2 - 5 %	Rhodinol
122-40-7	204-541-5	2 - 5 %	Amyl Cinnamal
107-75-5	203-518-7	2 - 5 %	Hydroxycitronellal
6259-76-3	228-408-6	1 - 2 %	Hexyl salicylate
65405-77-8	265-745-8	1 - 2 %	cis-3-Hexenyl salicylate

## 16. Other Information

### Total Fractional Values (TFV) as recommended by ECHA

TFV	Hazard Symbol	Risk Code	Risk Phrase
0.97	Xi	R36	Irritating to eyes
1.42	Xi	R38	Irritating to skin
1.15	Xi	R41	Risk of serious damage to eyes
10.30	Xi	R43	May cause sensitization by skin contact
1.88	N	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Remarks

According to directive 2001/58/EC the information in this safety data sheet is based on the properties of the material known to Agilex Flavors & Fragrances™ at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment Agilex Flavors & Fragrances™ holds no responsibility. This document is not intended for quality assurance purposes.

# Material Safety Data Sheet

Product Code: 2005BA110579

Product Identifier: SHEA BUTTER "A" Mixture of fragrance materials

Revision Date: 10/7/2014 Version: 16

*Pur*  
MAY 05 2015

## 1. Chemical Product and Company Identification

Product Code: 2005BA110579

Product Name: SHEA BUTTER "A"

CAS Registry Number: mixture

Company Name: Cosmo International Fragrances

2455 East Sunrise Boulevard, Suite 720 - Ft. Lauderdale, Florida 33304 - Phone: (954) 566-1516

Emergency Telephones : CHEMTREC - 1-800-424-9300 (USA) 1-703-527-3887 (Outside USA)



## Hazard Overview

### HMIS

Health: 1 = Slight Hazard

Flammability: 1 = Slight Hazard

Reactivity: 0 = Minimal Hazard

Personal Protection: Safety glasses, gloves

### NFPA

Health: 1 = Slight Hazard

Flammability: 1 = Slight Hazard

Reactivity: 0 = Minimal Hazard

Special Risk: NONE

### OSHA

Flammability: Combustible liquid - Class IIIB

## 2. Composition, Information on Ingredients

Hazardous components as defined in the OSHA Hazard Communication Standard: components with a HEALTH hazard (carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, etc.) and/or a PHYSICAL hazard (a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive, etc.)

Chemical or Common Name	CAS Number	% by weight(approx)	OSHA PEL long term	ACGIH TWA	ACGIH STEL
DIETHYL PHTHALATE	84-66-2	1-5			5 mgm3
BHT ; BUTYLATED HYDROXYTOLUENE	128-37-0	1-5			2 mgm3
COUMARIN	91-64-5	10-20			

## 3. Hazards Identification

This product is a mixture for which no health data exist. The hazard communication standard requires that such mixtures be assumed to present the same health hazards as do components that constitute at least 1% of the mixture ( 0.1% for carcinogenic and highly toxic mixture) although OSHA has noted that the hazards of individual components may be altered by including them in a mixture. The ingredients of this mixture are trade secrets.

## 4. First Aid Measures

### Eye Contact:

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

### Skin Contact:

Flush with large amounts of water. Use soap if available. Remove severely contaminated clothing (including shoes) and wash before reuse. If irritation persists, seek medical attention.

### Ingestion:

If swallowed, seek medical attention.

### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

## 5. Fire Fighting Measures

### Flash Point:

> 93°C / 200°F

### Equipment:

Fire fighters should wear normal protective equipment (full bunker gear) and positive-pressure self-contained breathing

apparatus.

**Extinguishing Media:**

All purpose dry chemical, foam, or carbon dioxide. Do not use water.

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## 6. Accidental Release Measures

**Spill and Leak Procedure:**

Contain spilled liquid with sand or dirt. DO NOT use combustible materials such as sawdust. Avoid runoff into storm sewers and ditches, which lead to waterways. Absorb spill with dry sand or dirt and place in a chemical waste container. Contact authorities if required.

---

## 7. Handling and Storage

**Handling:**

Keep container closed. Loosen closure cautiously before opening. Store in a cool, well-ventilated place away from incompatible materials. (See Stability and Reactivity Section 10). Keep away from heat, sparks and flame. Protect material from direct sunlight. Grounding and bonding procedures should be used when transferring materials. Empty containers may retain hazardous properties. Follow all MSDS/label warnings even after container is emptied. Keep away from oxidizing materials.

**Storage:**

Store in a tightly closed container in a cool, dry, well-ventilated area, Away from heat sources.

---

## 8. Exposure Control, Personal Protection

**Eye and Face Protection:**

Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face, supplied-air respirator.

**Skin Protection:**

For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or frequently repeated contact could occur, use protective clothing such as butyl rubber, impervious to this material. Use chemical resistant gloves.

**Respiratory protection:**

Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved positive pressure self-contained breathing apparatus.

**Exposure Limit(s):**

List of components contained in the formula with an OEL value

Component	OEL Type	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Notes
DIETHYL PHTHALATE	ACGIH			5			
BHT ; BUTYLATED HYDROXYTOLUENE	ACGIH			2			

---

## 9. Physical and Chemical Properties

Appearance: data not available

Color: data not available

Boiling Point: N.A.

Refractive Index: = 1.4631

Water Solubility: data not available

Oil Solubility: data not available

Density: data not available

Melting Point: N.A.

Flash Point: > 93°C / 200°F

Odor: data not available

Specific gravity = 1.0440

Vapor Pressure (mm Hg @20°C): = 0.0091

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## 10. Stability and Reactivity

**Stability:**

Stable.

**Conditions to Avoid:**

Strong oxidizing agents.



**Incompatibility:**

None.

**Decomposition:**

Will not occur.

**Polymerization:**

Will not occur.

**11. Toxicological Information****Toxicological Information of the Preparation**

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

**Toxicological information on main components of the mixture:**

COUMARIN	LD50 Oral Rat = 500.00000mg/kg
BHT ; BUTYLATED HYDROXYTOLUENE	LD50 Oral Rat = 890mg/kg
GAMMA-UNDECALACTONE	LD50 Oral Rat = 18500mg/kg
1,3,4,6,7, 8-HEXAHYDRO-4,6,6,7,8, 8-HEXAMETHYLCYCLOPENTA- GAMMA-2-BENZOPYRAN	LD50 Oral Rat > 5000mg/kg
	LD50 Skin Rabbit > 5000mg/kg

In case they have not been specified above, the following information should be considered as Not Available.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure
- i) STOT-repeated exposure
- j) aspiration hazard

**12. Ecological Information****List of Eco-Toxicological properties of the components**

Quantity	Component	Ident. Numb.	Ecotox Data
> 30 %	DIPROPYLENE GLYCOL	CAS: 25265-71-8 - EINECS: 203-821-4	LC50 Fish Carassius auratus 5000mg/l 24 Hr static
1-5 %	BHT ; BUTYLATED HYDROXYTOLUENE	CAS: 128-37-0 - EINECS: 204-881-4	EC50 Alga Pseudokirchneriella subcapitata 6mg/l 72H EC50 Alga Desmodesmus subspicatus 0.42mg/l 72H LC50 Fish Oryzias latipes 5mg/l 48 Hr
1-5 %	DIETHYL PHTHALATE	CAS: 84-66-2 - EINECS: 201-550-6	EC50 Daphnia Daphnia magna 36mg/l 48 Hr 36 - 74 EC50 Alga Desmodesmus subspicatus 21mg/l 96 Hr 36 - 74 LC50 Fish Pimephales promelas 16.8mg/l 96 Hr static
0.1-1 %	ETHYL VANILLIN	CAS: 121-32-4 - EINECS: 204-464-7	LC50 Fish Pimephales promelas 81.4mg/l 96 Hr flow-through 81.4-94.3
0.1-1 %	1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8, 8-HEXAMETHYLCYCLOPENTA-GAMMA-2- BENZOPYRAN	CAS: 1222-05-5 - EINECS: 214-946-9 - 67-548-EC: 603-212-00-7	EC50 Alga 1.49000mg/l 72h

0.1-1 %

GAMMA-DECALACTONE

CAS: 706-14-9 -  
EINECS: 211-892-8

LC50 Fish 0.95000mg/l 96 Hr

EC50 Daphnia 0.39000mg/l 48 Hr

LC50 Fish Pimephales promelas 17.1mg/l 96 Hr flow-through 17.1 - 19

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### 13. Disposal Consideration

Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

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### 14. Transportation

Road (DOT):

DOT UN Number: N/A  
DOT Hazard Class: N/A  
DOT Packaging Group (PG): N/A  
DOT Label(s): N/A  
DOT Symbol: N/A  
DOT Proper Shipping Name: N/A  
DOT Cargo Aircraft: N/A  
DOT Passenger Aircraft: N/A  
DOT Bulk: N/A  
DOT Non-Bulk: N/A

\*Note: In containers of 119 gallons or less, this product is not regulated by D.O.T. - Ground Transportation

IATA (Air):

IATA-Class: 9  
IATA-Un number: 3082  
IATA-Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(BHT ; BUTYLATED HYDROXYTOLUENE - 1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLCYCLOPENTA-GAMMA-2-BENZOPYRAN)  
IATA-Passenger Aircraft: 964  
IATA-Cargo Aircraft: 615  
IATA-Label: 9  
IATA-Packing group: III

Sea (IMDG):

IMDG-Un number: 3082  
IMDG-Class: 9  
IMDG-Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(BHT ; BUTYLATED HYDROXYTOLUENE - 1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLCYCLOPENTA-GAMMA-2-BENZOPYRAN)  
IMDG-Packing group: III  
IMDG-Page: N/A  
IMDG-Label: 9  
IMDG-EMS: F-A, S-F  
IMDG-MFAG: N/A  
Marine pollutant: Yes  
Toxic Component most present: BHT ; BUTYLATED HYDROXYTOLUENE  
Toxic Ingredients Qty: 0.50  
High Toxicity Ingredients Qty: 3.26

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### 15. Regulatory Information

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

CERCLA Reportable Quantity (Lbs): >60000 CERCLA Reportable Chemical : DIETHYL PHTHALATE

**TSCA (Toxic Substances Control Act):**

This material contains substances listed under the following TSCA sections:

8B, 8A, 8D

**California Proposition 65:**

This product does not contain any reproductive toxicant and/or California Proposition 65 regulated substances

**SARA 313:**

This product does not contain any SARA313 regulated ingredients

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**16. Other Information**

Main bibliographic sources:

LOLI database by ChemAdvisor.

The Information in this MSDS was obtained from current and reputable sources. However, the data is provided without warranty, express or implied, regarding its accuracy. It is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage, or expense resulting from improper use of this product.



UNIVAR®

jn Feb 10/16

**Material Safety Data Sheet**

NR08286

GLYCERINE 99.7 VEG USP FCC NON-KOSHER

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****Product Id:** NR08286**Product Name:** GLYCERINE 99.7 VEG USP FCC NON-KOSHER**Synonyms:** Glycerol, Glycerine.**Chemical Family:** None Known**Application:** Multiple uses including as emulsifier, emollient, plasticizer, humectant, sweetener, anti-freeze, in surface coatings and paints, cosmetics, drug and food products. Intermediate for making glycerol derivatives.**Distributed By:**

Univar Canada Ltd.

9800 Van Horne Way

Richmond, BC

V6X 1W5

**Prepared By:** The Environment, Health and Safety Department of Univar Canada Ltd.**Preparation date of MSDS:** 26/Jan/2016**Telephone number of preparer:** 1-866-686-4827**24-Hour Emergency Telephone Number (CANUTEC):** (613) 996-6666**2. HAZARDS IDENTIFICATION****Potential Acute Health Effects:****Eye Contact:** May cause slight transient (temporary) eye irritation.**Skin Contact:** Not expected to cause skin irritation. Contact with heated material may cause thermal burns.**Inhalation:** Should not be hazard at ambient temperatures. Mists may cause irritation of upper respiratory tract.**Ingestion:** Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause injury.**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Glycerine 56-81-5	99-100	Dermal LD50 Rabbit > 10 g/kg Inhalation LC50 Rat > 570 mg/m <sup>3</sup> 1 h

**Note:** No additional remark.

**4. FIRST AID MEASURES**

**Eye Contact:** Immediately flush eyes with water and continue washing for several minutes. If irritation persists, consult a physician.

**Skin Contact:** Wash thoroughly with soap and water.

**Inhalation:** Move person to fresh air.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

**Notes to Physician:** Treatment based on sound judgment of physician and individual reactions of patient.

**5. FIRE FIGHTING MEASURES**

**Flash Point:** 199 °C / 390.0 °F

**Flash Point Method:** Pinsky-Martens Closed Cup

**Autoignition Temperature:** 370 °C / 698 °F

**Flammable Limits in Air (%):** Not Available.

**Extinguishing Media:** Use DRY chemicals, CO<sub>2</sub>, alcohol foam or water spray.

**Special Exposure Hazards:** Contact of glycerin with strong oxidizing agents such as nitric acid or other strong acids, chromium trioxide, potassium chlorate or potassium permanganate may cause an explosion.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Acrolein.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**NFPA RATINGS FOR THIS PRODUCT ARE:** HEALTH 0, FLAMMABILITY 1, INSTABILITY 0

**HMIS RATINGS FOR THIS PRODUCT ARE:** HEALTH 0, FLAMMABILITY 1, REACTIVITY 0

**6. ACCIDENTAL RELEASE MEASURES**

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Consult local authorities.

**Procedure for Clean Up:** Absorb with an inert dry material and place in an appropriate waste disposal container. Flush area with water to remove trace residue.

**7. HANDLING AND STORAGE**

**Handling:** No special handling required. Avoid direct or prolonged contact with skin and eyes. Prevent formation of mist. Eye and skin contact should be avoided if handling at elevated temperatures.

**Storage:** Store in clean tight containers to prevent moisture pickup from air. Store in resin-lined steel, aluminum, stainless steel, or reinforced fiberglass vessels. Place away from incompatible materials.

**8. EXPOSURE CONTROLS/ PERSONAL PROTECTION****Engineering Controls:**

General (mechanical) room ventilation is expected to be satisfactory.

**Respiratory Protection:** Not normally needed. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment with combination filter (type A2/P2).

**Gloves:**

Appropriate chemical resistant gloves should be worn. Neoprene gloves. Nitrile gloves. Polyethylene gloves. Polyvinylchloride (PVC) gloves.

**Skin Protection:** Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Eyes:** Safety glasses with side shields or chemical goggles.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Glycerine	Not available.	10 mg/m <sup>3</sup> TWA 5 mg/m <sup>3</sup> TWA	Not Available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Liquid

**Color:** Water white

**Odor:** Mild

**pH:** Neutral

**Specific Gravity:** 1.26

**Boiling Point:** 290°C /554 °F@ 760 mmHg

**Freezing/Melting Point:** 18°C / 64.4°F

**Vapor Pressure:** <0.2 mmHg @ 100°C

**Vapor Density:** Not Available.

**% Volatile by Volume:** Not Available.

**Evaporation Rate:** Not Available.

**Solubility:** Miscible in water.

**VOCs:** Not Available.

**Viscosity:** 1412 mPa.s @ 20°C

**Molecular Weight:** Not Available.

**Other:** Not Available.

**10. STABILITY AND REACTIVITY**

**Chemical Stability:** Stable.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** None known.

**Materials to Avoid:** Strong oxidizing agents. Contact of glycerin with strong oxidizing agents such as Nitric Acid or other strong acids, Chromium Trioxide, Potassium Chlorate, or Potassium Permanganate may cause an explosion.

**Hazardous Decomposition Products:** Acrolein. Decomposition temperature: 200°C / 392 °F.

**Additional Information:**

No additional remark.

**11. TOXICOLOGICAL INFORMATION****Principle Routes of Exposure**

**Ingestion:** Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing larger amounts may cause injury.

**Skin Contact:** Not expected to cause skin irritation. Contact with heated material may cause thermal burns.

**Inhalation:** Should not be hazard at ambient temperatures. Mists may cause irritation of upper respiratory tract.

**Eye Contact:** May cause slight transient (temporary) eye irritation.

**Additional Information:**

**Acute Test of Product:**

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not Available.

Acute Inhalation LC50: Not Available.

**Carcinogenicity:**

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Glycerine	Not listed.	Not listed.

**Carcinogenicity Comment:** No additional information available.**Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** Not Available.**12. ECOLOGICAL INFORMATION****Ecotoxicological Information:**

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Glycerine	51,000 - 57,000 mg/L Oncorhynchus mykiss (Rainbow trout) LC50 96	>500 mg/L Daphnia magna EC50 24 hr	Not Available.

**Other Information:** Do not allow product to enter waterway or soil.**13. DISPOSAL CONSIDERATIONS****Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.**14. TRANSPORT INFORMATION****DOT (U.S.):**

DOT Shipping Name: Not Regulated.

DOT Hazardous Class Not Applicable.

DOT UN Number: Not Applicable.

DOT Packing Group: Not Applicable.

DOT Reportable Quantity (lbs): Not Available.

Note: No additional remark.

Marine Pollutant: No.

**TDG (Canada):**

TDG Shipping Name: Not Regulated.

Hazard Class: Not Applicable.

UN Number: Not Applicable.

Packing Group: Not Applicable.

Note: No additional remark.

Marine Pollutant: No.

**15. REGULATORY INFORMATION**

**U.S. TSCA Inventory Status:** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**U.S. Regulatory Rules**

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Glycerine	Not Listed.	Not Listed.	Not Listed.

**California Proposition 65:** Not Listed.

**MA Right to Know List:** Listed.

**New Jersey Right-to-Know List:** Listed.

**Pennsylvania Right to Know List:** Listed.

**Additional Notes:** Not Available.

**WHMIS Hazardous Class:**

NON-CONTROLLED



**16. OTHER INFORMATION****Additional Information:**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Disclaimer:****NOTICE TO READER:**

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

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\*\*\*END OF MSDS\*\*\*



## Material Safety Data Sheet

LA0547

Hydrogen Peroxide 50%

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Id:** LA0547  
**Product Name:** Hydrogen Peroxide 50%  
**Synonyms:** None  
**Chemical Family:** None Known  
**Application:** Oxidizing agent. Bleach & water chemicals.

**Distributed By:**  
Univar Canada Ltd.  
9800 Van Horne Way  
Richmond, BC  
V6X 1W5

**Prepared By:** The Safety, Health and Environment Department of Univar Canada Ltd.

**Preparation date of MSDS:** 31 March 2011

**Telephone number of preparer:** 1-866-686-4827

*Conf Nov 13/13*

**24-Hour Emergency Telephone Number (CANUTEC):** (613) 996-6666

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Hydrogen Peroxide 7722-84-1	50	LD50 (oral, male rat): 1193 mg/kg (35% solution) ; LD50 (oral, female rat): 801 mg/kg (60% solution) ; LD50 (oral, male rat): 75 mg/kg (70% solution) ; LD50 (oral, mouse): 2000 mg/kg (90% solution) ; LD50 (dermal, rabbit): approximately 690 mg/kg (90% solution) ; LD50 (oral, rat): 805 mg/kg (70% solution) ; LC50 (inhalation, rat) ; >0.17mg/l/4h (50% solution) ; LD50 (dermal, rabbit) : > 6500 mg/kg (70% solution)

**Note:** No additional remark.

### 3. HAZARDS IDENTIFICATION

**Potential Acute Health Effects:**

**Eye Contact:** Corrosive. May cause conjunctivitis, corneal burns and permanent damage. Symptoms may occur with delay.

**Skin Contact:** Corrosive. May cause burns resulting in permanent damage. Prolonged exposure may cause severe irritation and white discoloration. Burning may result in localized erythema (redness) or even blistering of the skin.

LA0547

Hydrogen Peroxide 50%

Page 1 of 6

### 3. HAZARDS IDENTIFICATION

**Inhalation:** Causes severe respiratory irritation. Vapours may cause pulmonary edema. Toxic effects may be delayed.  
**Ingestion:** Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus or stomach resulting in severe damage (bleeding, ulceration or perforation). Expected to cause burns to the gastrointestinal tract. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

### 4. FIRST AID MEASURES

**Eye Contact:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Have an ophthalmologist make an evaluation of eye injury.  
**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

**Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

**Notes to Physician:** Hydrogen peroxide at this concentration is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

### 5. FIRE FIGHTING MEASURES

**Flash Point:** None.

**Flash Point Method:** Not applicable.

**Autoignition Temperature:** Not available.

**Flammable Limits in Air (%):** Not Available.

**Extinguishing Media:** Do not use CO2 extinguisher on this material; use only water spray or appropriate foam. Do not use organic compounds on this material.

**Special Exposure Hazards:** Strong oxidizer. Contact with combustible materials may cause a fire. Release of oxygen may support combustion. Contact with incompatible materials (e.g. metals, alkalis and reducing agents) will cause hazardous decomposition resulting in the release of large quantities of heat, steam and oxygen gas. Exposure to heat may cause hazardous decomposition. A severe detonation hazard may exist when mixed with organic liquids, e.g. kerosene or gasoline. Isolate and restrict area access. Fight fire from a safe distance and from a protected location. Stay upwind. Stop leak only if safe to do so. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure build-up which could result in container rupture.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Oxygen. Steam.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**NFPA RATINGS FOR THIS PRODUCT ARE:** HEALTH 3 FLAMMABILITY 0 INSTABILITY 3 SPECIAL Oxidizer

**HMIS RATINGS FOR THIS PRODUCT ARE:** HEALTH 3, FLAMMABILITY 0, REACTIVITY 3

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent entry into sewers or streams, dike if needed.

**Procedure for Clean Up:** Restrict access to unprotected personnel. Stop leak only if safe to do so. Small spills: Flush area with water. Large spills : Dike with earth, sand or inert sorbent material to contain spill. Remove liquid with compatible pumps or vacuum equipment. Place in suitable container for disposal. Flush area with water. Keep materials which can burn away from spilled materials.

Spontaneous combustion hazard : - combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles, can cause the material to ignite and result in a fire.

## 7. HANDLING AND STORAGE

**Handling:** For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment. Use with adequate ventilation. Never use air pressure to empty a container.

**Storage:** Do not store near combustible materials. Store in a cool, dry, well ventilated area. Keep containers tightly closed. Do not store this material in containers made of light metals. Recommended container materials: glass, polyvinyl chloride, polyethylene, ceramics, polypropylene. Use adequate venting devices on all packages, containers and tanks and check correct operation periodically. Do not confine product in unvented vessels or between closed valves. Risk of overpressure and bursting due to decomposition in confined spaces and pipes.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

**Respiratory Protection:** If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use a NIOSH approved supplied air respirator.

### Gloves:

Natural rubber gloves. Butyl rubber gloves. Nitrile gloves.

**Skin Protection:** Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Hydrogen Peroxide	1 ppm TLV-TWA	1 ppm TWA 1.4 mg/m <sup>3</sup> TWA	75 ppm

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.

**Colour:** Clear Colourless

**Odour:** Pungent

**pH** 2 - 3.5 (20°C)

**Specific Gravity:** 1.072 -1.241

**Boiling Point:** 108°C /226.4°F

**Freezing/Melting Point:** -33°C / -27.4°F

**Vapour Pressure:** 48 Pa @ 30°C

**Vapour Density:** Heavier than air

**% Volatile by Volume:** Not Available.

**Evaporation Rate:** Faster than butyl acetate

**Solubility:** Completely miscible.

**VOCs:** Not Available.

**Viscosity:** 1.9 mPa.s @ 0°C

**Molecular Weight:** 34.02 g/Mol

**Other:** Not Available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** High temperatures. Spontaneous combustion hazard : - Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood, or other combustibles, can cause the material to ignite and result in a fire.

LA0547

Hydrogen Peroxide 50%

Page 3 of 6

## 10. STABILITY AND REACTIVITY

**Materials to Avoid:** Metals. Reducing agents. Alkalis. Combustible material. Organic materials. Heavy metals and their salts.

**Hazardous Decomposition Products:** None.

**Additional Information:**

No additional remark.

## 11. TOXICOLOGICAL INFORMATION

**Principle Routes of Exposure**

**Ingestion:** Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus or stomach resulting in severe damage (bleeding, ulceration or perforation). Expected to cause burns to the gastrointestinal tract. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

**Skin Contact:** Corrosive. May cause burns resulting in permanent damage. Prolonged exposure may cause severe irritation and white discoloration. Burning may result in localized erythema (redness) or even blistering of the skin.

**Inhalation:** Causes severe respiratory irritation. Vapours may cause pulmonary edema. Toxic effects may be delayed.

**Eye Contact:** Corrosive. May cause conjunctivitis, corneal burns and permanent damage. Symptoms may occur with delay.

**Additional Information:**

**Acute Test of Product:**

**Acute Oral LD50:** 805 mg/kg (rat)

**Acute Dermal LD50:** >6500 mg/kg (rabbit)

**Acute Inhalation LC50:** Not Available.

**Carcinogenicity:**

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Hydrogen Peroxide	Group 3	A3

**Carcinogenicity Comment:** No additional information available.

**Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** It is not possible to conclude that hydrogen peroxide is mutagenic. Positive results have been obtained in cultured humans cells. Negative results have been obtained in relevant studies using live animals. Positive results have been obtained in short-term mutagenicity tests.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:**

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Hydrogen Peroxide	LC50 (48 hr) carp: 42 mg/L. ; LC50 (96 hr) fish : 37.4 mg/l	EC50 (24 hr) Daphnia : 7.7 mg/l	NOEC (72 hr) Algae : 0.1 mg/l

**Other Information:**

Under ambient conditions quick hydrolysis, reduction or decomposition occurs. Hydrogen peroxide quickly decomposes to oxygen and water.

## 13. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.

## 14. TRANSPORT INFORMATION

**DOT (U.S.):**

**DOT Shipping Name:** HYDROGEN PEROXIDE AQUEOUS SOLUTION

LA0547

Hydrogen Peroxide 50%

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## 14. TRANSPORT INFORMATION

**DOT Hazardous Class** 5.1 (8)  
**DOT UN Number:** UN2014  
**DOT Packing Group:** II  
**DOT Reportable Quantity (lbs):** Not Available.  
**Note:** No additional remark.  
**Marine Pollutant:** No.

**TDG (Canada):**  
**TDG Shipping Name:** HYDROGEN PEROXIDE AQUEOUS SOLUTION  
**Hazard Class:** 5.1 (8)  
**UN Number:** UN2014  
**Packing Group:** II  
**Note:** No additional remark.  
**Marine Pollutant:** No.

## 15. REGULATORY INFORMATION

**U.S. TSCA Inventory Status:** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**Note:** Not available.

### U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Hydrogen Peroxide	Listed	Not Listed.	Not Listed.

**California Proposition 65:** Not Listed.  
**MA Right to Know List:** Listed.  
**New Jersey Right-to-Know List:** Listed.  
**Pennsylvania Right to Know List:** Listed.

**WHMIS Hazardous Class:**  
**C** OXIDIZING MATERIALS  
**D1B** TOXIC MATERIALS  
**E** CORROSIVE MATERIAL  
**F** DANGEROUSLY REACTIVE MATERIAL



## 16. OTHER INFORMATION

**Additional Information:**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Disclaimer:**

**NOTICE TO READER:**

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

**\*\*\*END OF MSDS\*\*\***



## MATERIAL SAFETY DATA SHEET

PAGE 1 OF 3  
CODE # 0972

## SECTION I PRODUCT INFORMATION

PRODUCT IDENTIFIER : IODINE USP  
 CHEMICAL NAME AND SYNONYMS : Iodine  
 IDENTIFICATION NUMBER : UN 3495  
 PRODUCT USE : Industrial use

SUPPLIER : B.G.R. Chemical Products Inc.  
 ADDRESS : 600 Delmar Avenue  
 Pointe-Claire, QC  
 H9R 4A8  
 TELEPHONE : (514) 630-3309

EMERGENCY: Newalta Industrial Services Inc.  
 24H NUMBER : 1-800-567-7455

## SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CONC.	CAS NUMBER	LD50(rat-oral)	LC50(rat-IhI)
Iodine	99 - 100%	7553-56-2	1.4 g/kg	Not available

## SECTION III WHMIS CLASSIFICATION



CLASS E



CLASS D2A

## SECTION IV PHYSICAL DATA

PHYSICAL STATE	Solid	pH (water=7)	5,4 (saturated solution)
ODOUR AND APPEARANCE	Pungent odor, violet-black crystals	SPECIFIC GRAVITY (water=1)	4.98
ODOUR THRESHOLD	Not available	VAPOR DENSITY (air=1)	8.8
BOILING POINT	≈ 184° C	VAPOR PRESSURE	0.3 mmHg at 20° C
FREEZING POINT	113,6° C	EVAPORATION RATE	Not available
COEFFICIENT OF WATER/OIL DISTRIBUTION	0.00324		

## SECTION V FIRE OR EXPLOSION

CONDITION OF FLAMMABILITY: Non flammable.

MEANS OF EXTINCTION: Use extinguish media appropriate for surrounding materials. Water spray may be used to keep fire exposed containers cool. Wear NIOSH approved self-contained breathing apparatus.

FLASH POINT	Not applicable	AUTO-IGNITION TEMPERATURE	Not available
UPPER FLAMMABLE LIMIT	Not applicable	MECHANICAL IMPACT SENSITIVITY	Not available
LOWER FLAMMABLE LIMIT	Not applicable	STATIC DISCHARGE SENSITIVITY	Not available

HAZARDOUS COMBUSTION PRODUCTS: Toxic fumes.

## SECTION VI REACTIVITY DATA

CHEMICAL INSTABILITY CONDITIONS: Stable.

INCOMPATIBLE SUBSTANCES AND CONDITIONS OF REACTIVITY: Incompatible with ammonia, powdered metals, metals and



**MATERIAL SAFETY DATA SHEET**PAGE 2 OF 3  
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strong reducing agents. Reaction can be violent or explosive with ammonium hydroxide, acetaldehyde, acetylene.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen iodide, Iodine

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**SECTION VII TOXICOLOGICAL PROPERTIES**

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**SKIN CONTACT/ABSORPTION:** Harmful if absorbed through the skin. Causes skin burns. Rare instances of allergic reactions to topical iodine solutions have caused fever, skin eruptions and death.

**EYE CONTACT:** Causes severe eye irritation. May cause eye burns. Vapor or mist may cause irritation and severe burns.

**INHALATION:** May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. May cause epiphora, which is an excessive flow of tears.

**INGESTION:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause burns to the digestive tract. May be harmful if swallowed.

**ACUTE/CHRONIC EXPOSURE EFFECTS:** Chronic overexposure can lead to iodism, a mild toxic syndrome, with symptoms of salivation, nasal discharge, sneezing, conjunctivitis, fever, laryngitis, bronchitis, stomatitis, and various skin rashes. Long-term high level exposure will cause a reversible reduction in thyroid function.

<b>CEILING LIMIT</b>	0,1 ppm - 0Never surpass this limit	<b>SHORT TERM EXPOSURE LIMIT</b>	Not available
<b>CARCINOGENICITY</b>	Not available	<b>SENSITIZATION TO PRODUCT</b>	Not available
<b>TERATOGENICITY</b>	Possible	<b>MUTAGENICITY</b>	Not available
<b>SYNERGISTIC PRODUCTS</b>	Not available	<b>REPRODUCTIVE TOXICITY</b>	Possible

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**SECTION VIII PREVENTIVE MEASURES**

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**PROTECTIVE GLOVES:** Protective gloves are recommended.

**EYE PROTECTION:** Wear chemical safety glasses and face shield.

**RESPIRATORY PROTECTION:** Wear respiratory apparatus according to contamination level in work place.

**OTHER PROTECTIVE EQUIPMENTS:** Wear impervious clothing, apron, and boots. Provide an eye wash station and a quick-drench facilities in working area.

**ENGINEERING CONTROLS:** Use a local exhaust ventilation.

**PROCEDURES TO BE FOLLOWED IN CASE OF SPILL OR LEAK:** Ventilate the area of the leak or spill. Clean-up personnel should wear protective clothing and respiratory equipment suitable for toxic or corrosive fluids or vapors. Dike and cover spill with ferrous sulfate, sodium sulfate or sodium thiosulfate, then moisten and slurry with soda ash. Collect by scooping, mopping or wet vacuuming as appropriate. Flush area of spill with dilute ferrous sulfate or sodium sulfate solution and discard to sewer. Neutralized waste may be transferred to a closed, preferably metal, container and sent to an approved waste disposal facility.

**WASTE DISPOSAL:** Dispose of in accordance with municipal, provincial and federal regulations.

**HANDLING AND STORAGE PROCEDURES:** Avoid contact with skin, eyes and clothing. Do not breath vapors or mists. Do not ingest. Keep container tightly closed. Store in a cool, dry, well-ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive combustible materials and out of direct sunlight.

**SPECIAL SHIPPING INFORMATION:**

Shipping Name: Iodine UN 3495  
Class/Division : 8(6.1) PG III

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**SECTION IX FIRST AID MEASURES**

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**SKIN:** Flush with water for at least 15 minutes while removing contaminated clothing. Call a physician if irritation persists.

**EYES:** Flush with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.



MATERIAL SAFETY DATA SHEET

PAGE 3 OF 3  
CODE # 0972

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**INGESTION:** If conscious, immediately give 2 - 4 glasses of water or milk. Never give anything by mouth to an unconscious or convulsing person. Call a physician.

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**SECTION X PREPARATION INFORMATION**

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**PREPARED BY :** B.G.R. Chemical Products Inc.  
**TELEPHONE :** (514) 694-7442  
**DATE :** January 26<sup>th</sup>, 2012

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IMPORTANT The information presented herein is believed to be accurate and is offered only as a guide. Users should make their own tests to determine the suitability of these products for their own particular purposes. Users assume all risk of use, storage and handling of the product. No warranty, express or implied, is made including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be construed as a license to operate under or recommendation to infringe any patents.

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- Email: [rob@provincewidesafetytraining.ca](mailto:rob@provincewidesafetytraining.ca)
- Register Online: [www.provincewidesafetytraining.ca](http://www.provincewidesafetytraining.ca)

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- **\*\*\*New\*\*\* Truck Mounted Train the Trainer Certification**
- **Forklift Certification**
- **Forklift Train the Trainer Certification**
- **Scissor Lift/Aerial Lift Certification**
- **Scissor Lift/Aerial Lift Train the Trainer Certification**
- **Skid Steer (Bobcat) Certification**
- **Skid Steer (Bobcat) Train the Trainer Certification**
- **Tele-handler (Zoom Boom) Certification**
- **Tele-handler (Zoom Boom) Train the Trainer Certification**
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Email: [rob@provincewidesafetytraining.ca](mailto:rob@provincewidesafetytraining.ca)



\*\*\*If you would like to be removed from this fax list, please email me with your fax# and company name. Thank you!\*\*\*



*Feb 02/16*

# Material Safety Data Sheet

## DOW CHEMICAL CANADA ULC

**Product name:** Isopropanol, Anhydrous, USP/EP Grade

**Issue Date:** 11/19/2014

**Print Date:** 01/28/2016

DOW CHEMICAL CANADA ULC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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### 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** Isopropanol, Anhydrous, USP/EP Grade

**Recommended use of the chemical and restrictions on use**

**Identified uses:** All-purpose solvent. Industrial solvent. Chemical intermediate. We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative. Ingredient for pharmaceutical preparations. Cosmetics ingredient. Industrial solvent for cleaner and coating formulations. Chemical additive.

**COMPANY IDENTIFICATION**  
DOW CHEMICAL CANADA ULC  
SUITE 2100  
450 - 1ST STREET S.W.  
CALGARY AB T2P 5H1  
CANADA

**For MSDS Updates and Product Information:** 800-258-2436

**Prepared by:** Prepared for use in Canada by EH&S, Hazard Communications.

**Revision Date:** 11/19/2014

**Print Date:** 01/28/2016

**Customer Information Number:**

800-258-2436

SDSQuestion@dow.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 1-888-226-8832

**Local Emergency Contact:** 613-996-6666

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### 2. HAZARDS IDENTIFICATION

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**Emergency Overview**

**Appearance**

Physical state

Liquid.

Color

Colorless

**Odor**

Alcohols

<b>Hazard Summary</b>	<b>WARNING!!</b> FLAMMABLE LIQUID AND VAPOR. Causes eye irritation. May be harmful if inhaled. Vapor explosion hazard. Vapors may travel a long distance; ignition and/or flash back may occur. Isolate area. Keep upwind of spill. Stay out of low areas. Warn public of downwind explosion hazard. Eliminate ignition sources.
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**Potential Health Effects**

**Eyes:** May cause pain disproportionate to the level of irritation to eye tissues.  
May cause moderate eye irritation.  
May cause moderate corneal injury.  
Vapor may cause eye irritation experienced as mild discomfort and redness.  
Vapor may cause lacrimation (tears).

**Skin:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.  
Prolonged exposure not likely to cause significant skin irritation.  
May cause drying and flaking of the skin.

**Inhalation:** With good ventilation, single exposure is not likely to be hazardous. In poorly ventilated areas, vapors or mists may accumulate and cause respiratory irritation.  
Prolonged excessive exposure may cause adverse effects.  
Excessive exposure (400 ppm) to isopropanol may cause eye, nose and throat irritation.  
Incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels.  
Observations in animals include middle ear lining damage upon exposure to vapors of isopropanol. However, the relevance of this to humans is unknown

**Ingestion:** Low toxicity if swallowed.  
Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.  
May cause central nervous system depression.  
May cause nausea and vomiting.  
Signs and symptoms of excessive exposure may include:  
Facial flushing.  
Low blood pressure.  
Irregular heartbeats.  
Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**Chronic Exposure:** In animals, effects have been reported on the following organs:  
Kidney.  
Liver.  
Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.  
Observations in animals include:  
Lethargy.  
Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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This product is a substance.

Component	CASRN	Weight percent	
Isopropanol	67-63-0	100.0%	Hazardous components

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### 4. FIRST AID MEASURES

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#### Description of first aid measures

**General advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

**Most important symptoms and effects, both acute and delayed:** Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Hemodialysis may be of benefit if substantial amounts have been ingested and the patient is showing signs of intoxication. Consider hemodialysis for patients with persistent hypotension or coma unresponsive to standard therapy (isopropanol levels >400 - 500 mg/dl). (Goldfrank 1998, King et al, 1970). No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may vent and/or rupture due to fire. When product is stored in closed containers, a flammable atmosphere can develop. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Use caution and test if material is burning before entering area. Material burns with invisible flame.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. If

available, use foam to smother or suppress. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Keep away from heat, sparks and flame. Avoid contact with eyes. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically bond and ground all containers and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature.

### Storage stability

Shelf life: Use within 20 Month

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Isopropanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	400 ppm
	CA AB OEL	TWA	492 mg/m3 200 ppm
	CA AB OEL	STEL	984 mg/m3 400 ppm
	CA BC OEL	TWA	200 ppm
	CA BC OEL	STEL	400 ppm
	CA QC OEL	TWAEV	983 mg/m3 400 ppm
	CA QC OEL	STEV	1,230 mg/m3 500 ppm

Consult local authorities for recommended exposure limits.

### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Examples of acceptable glove barrier



materials include: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Wear clean, body-covering clothing.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

Physical state	Liquid.
Color	Colorless
Odor	Alcohols
Odor Threshold	Not available
pH	No test data available
Melting point/range	Not applicable to liquids
Freezing point	-89 °C <i>Literature</i>
Boiling point (760 mmHg)	82 °C <i>Literature</i>
Flash point	closed cup 12 °C <i>Tag Closed Cup ASTM D56</i>
Evaporation Rate (Butyl Acetate = 1)	2.9 <i>Literature</i>
Flammability (solid, gas)	Flammable liquid
Lower explosion limit	2.0 % vol <i>Literature</i>
Upper explosion limit	12.0 % vol <i>Literature</i>
Vapor Pressure	6.02 kPa at 25 °C <i>Literature</i>
Relative Vapor Density (air = 1)	2.1 <i>Literature</i>
Relative Density (water = 1)	0.7855 at 20 °C / 20 °C <i>Literature</i>
Water solubility	100 % at 20 °C <i>Literature</i>
Partition coefficient: n-octanol/water	log Pow: 0.05 <i>Measured</i>
Auto-ignition temperature	399 °C <i>Literature</i>
Decomposition temperature	No test data available
Dynamic Viscosity	2.1 mPa.s at 25 °C <i>Literature</i>
Kinematic Viscosity	No test data available
Explosive properties	Not explosive
Oxidizing properties	No
Liquid Density	0.785 g/cm <sup>3</sup> at 20 °C <i>Literature</i>

**Molecular weight** no data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** no data available

**Chemical stability:** Thermally stable at typical use temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

**Incompatible materials:** Avoid contact with: Aldehydes. Halogenated organics. Halogens. Strong acids. Strong oxidizers.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information on this product or its components appear in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause central nervous system depression. May cause nausea and vomiting. Signs and symptoms of excessive exposure may include: Facial flushing. Low blood pressure. Irregular heartbeats.

Lethal Dose, Humans, 100 ml Estimated.

LD50, rat, 4,700 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, rabbit, 6,280 mg/kg

#### Acute inhalation toxicity

With good ventilation, single exposure is not likely to be hazardous. In poorly ventilated areas, vapors or mists may accumulate and cause respiratory irritation. Prolonged excessive exposure may cause adverse effects. Excessive exposure (400 ppm) to isopropanol may cause eye, nose and throat irritation. Incoordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels.

Observations in animals include middle ear lining damage upon exposure to vapors of isopropanol. However, the relevance of this to humans is unknown

LC50, rat, male and female, 6 Hour, vapour, > 10000 ppm

**Skin corrosion/irritation**

Prolonged exposure not likely to cause significant skin irritation.  
May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

May cause pain disproportionate to the level of irritation to eye tissues.  
May cause moderate eye irritation.  
May cause moderate corneal injury.  
Vapor may cause eye irritation experienced as mild discomfort and redness.  
Vapor may cause lacrimation (tears).

**Sensitization**

Did not demonstrate the potential for contact allergy in mice.  
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause drowsiness or dizziness.  
Route of Exposure: Ingestion  
Target Organs: Central nervous system

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

In animals, effects have been reported on the following organs:  
Kidney.  
Liver.  
Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.  
Observations in animals include:  
Lethargy.

**Carcinogenicity**

Did not cause cancer in laboratory animals.

**Teratogenicity**

Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**Reproductive toxicity**

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

**Mutagenicity**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Aspiration Hazard**

May be harmful if swallowed and enters airways.

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information on this product or its components appear in this section when such data is available.*

**Toxicity****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 9,640 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

NOEC, alga Scenedesmus sp., static test, 7 d, Growth inhibition (cell density reduction), 1,800 mg/l

ErC50, alga Scenedesmus sp., static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l

**Chronic aquatic toxicity****Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, 30 mg/l

**Persistence and degradability**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 95 %

**Exposure time:** 21 d

**Method:** OECD Test Guideline 301E or Equivalent

10-day Window: Pass

**Biodegradation:** 53 %

**Exposure time:** 5 d

**Method:** Other guidelines

**Theoretical Oxygen Demand:** 2.40 mg/mg

**Chemical Oxygen Demand:** 2.09 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	20 - 72 %
20 d	78 - 86 %

**Photodegradation**

Test Type: Half-life (indirect photolysis)

Sensitizer: Radicaux OH

Atmospheric half-life: 1.472 d

Method: Estimated.

**Bioaccumulative potential**

Bioaccumulation: Bioconcentration potential is low (BCF &lt; 100 or Log Pow &lt; 3).

Partition coefficient: n-octanol/water(log Pow): 0.05 Measured

**Mobility in soil**

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient(Koc): 1.1 Estimated.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

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**14. TRANSPORT INFORMATION**

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**TDG**

Proper shipping name	ISOPROPANOL
UN number	UN 1219
Class	3
Packing group	II

**Classification for SEA transport (IMO-IMDG):**

Proper shipping name	ISOPROPANOL
UN number	UN 1219
Class	3
Packing group	II
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

**Proper shipping name**      Isopropanol  
**UN number**                    UN 1219  
**Class**                            3  
**Packing group**                II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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**15. REGULATORY INFORMATION**

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**Hazardous Products Act Information: CPR Compliance**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Hazardous Products Act Information: WHMIS Classification**

**Hazards**

**B2**                                Flammable Liquid with a Flash Point Less Than 37.8 C  
**D2B**                              Eye or Skin Irritant

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

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

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**16. OTHER INFORMATION**

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**Hazard Rating System**

**NFPA**

Health	Fire	Reactivity
1	3	0

**Revision**

Identification Number: 101196859 / A208 / Issue Date: 11/19/2014 / Version: 5.1

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	Canada. British Columbia OEL

CA QC OEL	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
STEL	short-term exposure limit
STEV	Short-term exposure value
TWA	8-hour time weighted average
TWAEV	Time-weighted average exposure value

**Information Source and References**

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW CHEMICAL CANADA ULC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

# MATERIAL SAFETY DATA SHEET

JA Aug 10/15

## 1. IDENTIFICATION OF SUBSTANCE/PREPARATION & COMPANY.

PRODUCT NAME: Jojoba Oil

PRODUCT CODE: 7090

SUPPLIER: Inovia International, Wilds Lodge, Empingham Road, Stamford, Lincs PE9 3UL  
Emergency Tel No: 01780-765390 Emergency Contact: Mr. Stephen Hughes

## 2. COMPOSITION / INFORMATION ON INGREDIENTS.

Definition/Botanical Origin: The fixed oil expressed or extracted from seeds of the desert shrub, Jojoba, *Buxus chinensis*.

CAS No: 61789-91-1 Status: natural

Additives: none Application: Aromatherapy, skin care etc

IFRA: Not restricted INCI name: Buxus chinensis

## 3. HAZARDS IDENTIFICATION:

Concentrated product. Observe good housekeeping procedures.

## 4. FIRST-AID MEASURES:

INHALATION: No vapours present at normal temperatures.  
EYE CONTACT: Rinse immediately with plenty of water for at least 15 mins. Contact a doctor if symptoms persist.  
SKIN CONTACT: Wash thoroughly with soap & water, flush with plenty of water. If irritation persists, seek medical advice.  
INGESTION: Not considered dangerous. Edible quality.  
OTHER: When assessing action take Risk & Safety Phrases into account (Section 15)

## 5. FIRE FIGHTING MEASURES.

EXTINGUISHING MEDIA RECOMMENDED: Use CO<sub>2</sub>, Dry Powder or Foam type Extinguishers, spraying extinguishing media to base of flames. Do not use direct water jet on burning material.  
SPECIAL MEASURES: Avoid vapour inhalation. Keep away from sources of ignition. Do not smoke. Wear positive pressure self-contained breathing apparatus & protective clothing.  
EXTINGUISHING PROCEDURES: Closed containers may build up pressure when exposed to heat and should be cooled with water spray.

## 6. ACCIDENTAL RELEASE MEASURES.

PERSONAL PRECAUTIONS: Avoid contact with skin eyes and clothes. Note that spillages constitute a slipping hazard. Use individual protective equipment (safety glasses, waterproof-boots, suitable protective clothing) in case of major spillages.  
ENVIRONMENT PRECAUTIONS: Keep away from drains, soils, surface & groundwaters.  
CLEANING UP METHODS FOR SPILLAGES: Remove all potential ignition sources. Contain spilled material. Cover with an inert or non-combustible inorganic absorbent material, sweep

Jojoba Oil

Revised 03/09. This document replaces any previously issued document



up and remove to an approved disposal container. Clean with hot water & detergents. Observe state, federal & local disposal regulations.

## **7. HANDLING & STORAGE.**

**PRECAUTIONS IN HANDLING:** Apply good manufacturing practice & industrial hygiene practices. Observe good personal hygiene, and do not eat, drink or smoke whilst handling. Avoid static discharges.

**STORAGE CONDITIONS:** Store in tightly closed original container, in a cool & dry area away from heat sources & protected from light. Keep air contact to a minimum.

**FIRE PROTECTION:** Keep away from ignition sources & naked flames. Take precautions to avoid static discharges in working area.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION.**

**RESPIRATORY PROTECTION:** No special measures under normal conditions.

**HAND PROTECTION:** No special measures under normal conditions.

**EYE PROTECTION:** Use safety glasses if there is a risk of splashing.

**WORK/HYGIENE PRACTICES:** Wash hands with soap & water after handling.

## **9. PHYSICAL & CHEMICAL PROPERTIES.**

**COLOUR:** Pale yellow

**APPEARANCE:** Slightly viscous liquid to solid paste, according to ambient temperature.

**ODOUR:** Odourless

**FLASH-POINT:** >100

**MELTING POINT:** 7-9°C

**ACID INDEX:** <1.0

**IODINE INDEX:** 80 to 90

**SPECIFIC GRAVITY @ 20°C:** 0.853 – 0.890

**REFRACTIVE INDEX @ 20°C:** 1.464 - 1.468

**SOLUBILITY IN VEGETABLE OIL:** Soluble

**SOLUBILITY IN WATER:** Insoluble

## **10. STABILITY & REACTIVITY.**

**REACTIVITY:** It presents no significant reactivity hazards, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidising agents.

**DECOMPOSITION:** None (thermal decomposition products are H<sub>2</sub>O and CO<sub>2</sub>)

## **11. TOXICOLOGICAL INFORMATION.**

No known data

## **12. ECOLOGICAL INFORMATION.**

**BIODEGRADABILITY:** Readily biodegradable

**PRECAUTIONS:** Prevent surface contamination of soil, ground & surface water.

## **13. DISPOSAL CONSIDERATIONS.**

Avoid disposing to drainage systems and into the environment. Seek expert advice.

## **14. TRANSPORT REGULATIONS.**

**Road (ADR/RID):** n/a

**AIR (IATA):** n/a

**SEA (IMDG):** n/a

CHIP: see section 15

**15. REGULATORY INFORMATION.** According to Directive 88/379/EEC

HAZARDS: n/a  
SYMBOLS: n/a  
RISK PHRASES: n/a  
SAFETY PHRASES: n/a

**16. OTHER INFORMATION.**

Cosmetic Directives 7<sup>th</sup> Amendment: Not restricted

**PACKAGING:**

Type	Suitability
Glass	Yes
Lacquer lined steel/tin	Yes
Aluminium	Yes
HPPE	Yes
F/HDPE	Yes
Other plastic	Yes

**SHELF LIFE**

When stored within advised conditions, re-test after 12 months then at 6 monthly intervals up to a maximum life of 24 months.

**Q.C. REQUIREMENTS.**

In-line with general product specification. Always satisfy suitability for specific application.

The data provided in this material safety data sheet is meant to represent typical data/analysis for this product and is correct to the best of our knowledge. The data was obtained from current and reliable sources, but is supplied without warranty, expressed or implied, regarding its' correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product, and to assume liability for loss, injury, damage or expense arising from improper use of this product. The information provided does not constitute a contract to supply to any specification, or for any given application, and buyers should seek to verify their requirements and product use.

printed on Nov 13/13 *Conf*



## MATERIAL SAFETY DATA SHEET

### 01 – IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

PRODUCT NAME: MENTHOL CRYSTALS

SYNONYM: MENTHOL CRYSTALS USP; (1 $\alpha$ ,2 $\beta$ ,5 $\alpha$ )-5-METHYL-2-(1-METHYLETHYL)CYCLOHEXANOL; 3-p-MENTHANOL; L-MENTHOL

PRODUCT USE: AROMATIC CHEMICAL

ADDRESS: Corporation NOVOTASTE INC.  
3650 BOUL. MATTE  
BROSSARD, QC  
J4Y 2Z2 CANADA

PREPARATION DATE OF MSDS: 2008/10/01

BY: QUALITY ASSURANCE (450-444-2850)

LAST UPDATE: 2013/10/22

EMERGENCY NUMBER: 613-996-6666 (CANUTEC)

### 02 – COMPOSITION / INFORMATION ON INGREDIENTS

CAS NUMBER: 2216-51-5

EINECS NUMBER: 218-690-9

FEMA NUMBER: 2665

### 03 – HAZARDS IDENTIFICATION

PHYSICAL AND CHEMICAL HAZARD:

REFER TO THE PARAGRAPHS RELATING TO PHYSICO-CHEMICAL PROPERTIES AND REGULATORY INFORMATION.

HAZARDS TO MAN:

REFER TO THE PARAGRAPHS RELATING TO TOXICOLOGICAL DATA AND REGULATORY INFORMATION.

HAZARDS TO THE ENVIRONMENT:

REFER TO THE PARAGRAPHS RELATING TO ECOLOGICAL DATA AND REGULATORY INFORMATION.

### 04 – FIRST-AID MEASURES

SKIN CONTACT:

WASH WITH LARGE QUANTITIES OF WATER (OR WATER + SOAP). REMOVE CONTAMINATED CLOTHES.  
IF IRRITATION PERSISTS OR ANY SIGN OF TISSUE DAMAGE IS APPARENT, OBTAIN MEDICAL ADVICE.

EYE CONTACT:

IRRIGATE COPIOUSLY WITH WATER FOR AT LEAST TEN MINUTES.  
OBTAIN MEDICAL ADVICE IF IRRITATION OR EVIDENCE OF TISSUE DAMAGE PERSISTS.

INGESTION:

RINSE MOUTH WITH WATER. OBTAIN IMMEDIATE MEDICAL ADVICE.  
DO NOT INDUCE VOMITING.

INHALATION:

REMOVE THE PERSON TO FRESH AIR AND KEEP AT REST.  
OBTAIN MEDICAL ADVICE IMMEDIATELY.

### 05 – FIRE- FIGHTING MEASURES

EXTINGUISHING MEDIA:

RECOMMENDED: CARBON DIOXIDE, SPECIAL LIQUID OR DRY POWDER EXTINGUISHERS.  
USABLE: FOAM EXTINGUISHERS.  
INADVISABLE: DIRECT WATER JET.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CLOSED CONTAINERS MAY BUILD UP PRESSURE AT ELEVATED TEMPERATURES.  
IF POSSIBLE, CONTAINERS SHOULD BE COOLED WITH A WATER SPRAY.

### 06 – ACCIDENTAL RELEASE MEASURES

TO AVOID A POSSIBLE CONTAMINATION OF THE ENVIRONMENT, CONTAIN SPILLED MATERIAL.  
COVER WITH AN INERT, INORGANIC, NON-COMBUSTIBLE ABSORBENT MATERIAL, SWEEP UP AND REMOVE TO AN APPROVED DISPOSAL CONTAINER.  
DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.  
AVOID OPEN FLAMES OR OTHER SOURCES OF IGNITION. AVOID INHALATION OF VAPORS.

### 07 – HANDLING AND STORAGE

100702

## HANDLING

MEASURES SHOULD BE TAKEN TO PREVENT MATERIALS FROM BEING SPLASHED INTO THE EYES OR ON THE SKIN. THIS SHOULD INCLUDE THE WEARING OF EYESHIELDS AND PROTECTIVE CLOTHING. SMOKING SHOULD NOT BE PERMITTED IN AREAS WHERE THEY ARE HANDLED. SPONTANEOUS COMBUSTION OF CERTAIN PRODUCT SOAKED RAGS HAVE BEEN REPORTED. MAINTAIN ADEQUATE AIR CIRCULATION IN THE WORKING AREA.

## STORAGE

STORE IN TIGHTLY SEALED AND PREFERABLY FULL CONTAINERS IN A COOL, DRY LOCATION. PROTECT FROM LIGHT. CHECK QUALITY BEFORE USE IF STORED FOR MORE THAN 6 MONTHS. KEEP IN SUITABLE OR ORIGINAL CONTAINER. STORAGE DETAILS ARE IN THE PRODUCT SPECIFICATIONS SHEET.

## 08 – EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: IN WELL-VENTILATED AREAS, RESPIRATORY PROTECTION IS NOT NORMALLY REQUIRED. IN CONFINED, POORLY VENTILATED AREAS, IT MAY BE REQUIRED.  
HAND PROTECTION: THE USE OF CHEMICAL RESISTANT GLOVES IS RECOMMENDED  
EYE PROTECTION: THE USE OF SAFETY GLASSES IS RECOMMENDED  
SKIN PROTECTION: LIGHT PROTECTIVE CLOTHING IS RECOMMENDED.  
VENTILATION: PROVIDE ADEQUATE VENTILATION; USE LOCAL EXHAUST FAN IF NECESSARY.

## 09 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: POWDER, CRYSTALS NEEDLE LIKE  
COLOR: COLORLESS  
ODOR: CHARACTERISTIC (ODOR THRESHOLD: NOT DETERMINED)

FLASH POINT (CC) (°C): >93.3°C  
WATER SOLUBILITY: SLIGHTLY SOLUBLE  
SPECIFIC GRAVITY (25°C): NOT APPLICABLE  
REFRACTIVE INDEX (20°C): NOT APPLICABLE  
BOILING POINT: >35°C  
MELTING POINT: 41-43°C  
FREEZING POINT: NOT DETERMINED  
VAPOR PRESSURE: 0.1 mm Hg @ 20°C  
VAPOR DENSITY (AIR=1): NOT DETERMINED  
PARTITION COEFFICIENT n-OCTANOL/WATER: NOT DETERMINED  
SELF-IGNITION TEMPERATURE: NOT DETERMINED  
PH: NOT APPLICABLE  
EVAPORATION RATE: NOT DETERMINED

## 10 – STABILITY AND REACTIVITY

STABILITY: STABLE  
CONDITION TO AVOID: EXCESSIVE HEAT, OPEN FLAMES OR OTHER SOURCES OF IGNITION.

## 11 – TOXICOLOGICAL INFORMATION

LIQUID MAY BE IRRITATING TO SKIN AND EYES.  
LD<sub>50</sub> (ORAL, RAT) = 2426-2615 mg/kg

## 12 – ECOLOGICAL INFORMATION

NO ECOTOXICOLOGIC INFORMATION KNOWN AT THIS TIME  
AVOID ANY POLLUTION OF GROUND, SURFACE OR UNDERGROUD WATER.

## 13 – DISPOSAL CONSIDERATIONS

DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

## 14 – TRANSPORTATION INFORMATION

UN NUMBER: NOT APPLICABLE  
RID/ADR, IMDG, ICAS/IATA: NOT APPLICABLE  
MARINE POLLUTANT: NOT DETERMINED

15 – REGULATORY INFORMATION

WHMIS CLASSIFICATION: D2B

THIS PRODUCT HAS BEEN CLASSIFIED ACCORDING TO THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16 – OTHER INFORMATION

CONTROLLED PRODUCTS REGULATION (CPR) (UNDER THE HAZARDOUS PRODUCTS ACT, WHICH IS PART OF THE LEGISLATION RELATIVE TO WHMIS) APPLIES ONLY TO CONTROLLED PRODUCTS (THAT IS TO SAY DANGEROUS) PERSUANT TO WHMIS. THEREFORE, THE NON-CONTROLLED PRODUCTS PERSUANT TO WHMIS ARE NOT SUBJECT TO CPR, NOR TO THE RULE OF UPDATING EVERY 3 YEARS. AS A GENERAL RULE NOVOTASTE UPDATES PRODUCT MSDS AT CUSTOMER REQUEST. UPDATES OF NON-CONTROLLED PRODUCT MSDS ARE OF LESS IMPORTANCE THAN THOSE OF CONTROLLED PRODUCTS. UPDATES OF NON-CONTROLLED PRODUCTS MSDS MUST NEVERTHELESS BE MADE WITHIN A REASONABLE TIME.

DISCLAIMER

THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THE DATA SHEET REPRESENT, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, AN ACCURATE AND RELIABLE REPRESENTATION AS TO THE KNOWN DATA FOR THIS MATERIAL. THE DATA HAS BEEN OBTAINED FROM A NUMBER OF SOURCES AND NOVOTASTE CANNOT GUARANTEE ITS ACCURACY, RELIABILITY AND COMPLETENESS NOR CAN NOVOTASTE ASSUME ANY LIABILITY FOR ANY LOSS OR DAMAGE ARISING OUT OF THE USE OF THIS DATA. IT IS THE USER'S RESPONSIBILITY TO EVALUATE THIS INFORMATION IN A PRUDENT MANNER AND TO USE IT IN A MANNER THAT IS CONSISTENT FOR ITS PARTICULAR PURPOSE.

**MATERIAL SAFETY DATA SHEET**  
**NIPAGIN M SODIUM**

 Substance key: 000000055553  
 Version : 1 - 6 / USA

 Revision Date: 02/28/2011  
 Date of printing :07/26/2011

*New 13/13 conf*
**Section 01 - Product Information**

<b>Identification of the company:</b>	Clariant Production UK Ltd Unit 2, Rawdon Park Yeadon, LEEDS, LS19 7BA Telephone No.: +44 113 239 7920
	<b>Information of the substance/preparation:</b> Product Safety 1-704-331-7710 Emergency tel. number: +1 800-424-9300 CHEMTREC

**Trade name:** NIPAGIN M SODIUM  
**Synonyms:** Nipagin M sodium n.p.  
**Primary product use:** Personal Care Preservatives  
**Chemical family:** sodium methyl-4-hydroxybenzoate

**Section 02 - Composition information on hazardous ingredients**

Hazardous Ingredients:

Component	CAS-no. (Trade secret no.)	Concentration
Sodium Methyl-4-Hydroxybenzoate	5026-62-0	> 95.5 %

**Section 03 - Hazards identification**

**Emergency overview:** White powder  
 May cause dust explosions.  
 Eye irritant.  
 Respiratory irritant.

**Expected Route of entry:**

**Inhalation:** Particulates of this material are probably irritating to respiratory passages, nose, and throat.  
 May cause mild skin irritation.

**Skin contact:** Not expected to be toxic by skin absorption.  
 Causes severe eye irritation

**Eye contact:** The acute oral toxicity of this material is between 500 and 5000 mg/kg. Relative to other materials, this material is classified as slightly toxic by ingestion.

**Ingestion:**

**Skin absorption:** no

**Health effects of exposure:**

Benzoic acid, 4-hydroxy-, methyl ester, sodium salt ( 5026-62-0 )  
 Sodium methyl-4-hydroxybenzoate: May cause severe eye irritation with the possibility of eye

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damage. Prolonged contact with skin may cause slight irritation. LD50(oral)(mouse): 2,000 mg/kg.

Known effects on other illnesses:

No known effects on other illnesses for this product.

Listed carcinogen:

IARC: No  
NTP: No  
OSHA: No  
Other: No

HMIS:

Health: 2

Flammability: 1

Reactivity: 0

Personal protection: E

**Section 04 - First aid measures****After inhalation:**

Get victim to fresh air. Give artificial respiration or oxygen if breathing has stopped. Get prompt medical attention. Do not give fluids if victim is unconscious.

**After contact with skin:**

Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

**After contact with eyes:**

Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.

**After ingestion:**

If ingested, seek medical assistance immediately.

**Advice to doctor / Treatment:**

None known.

**Section 05 - Fire fighting measures**

Flashpoint: Not applicable  
Lower explosion limit: Not applicable  
Upper explosion limit: Not applicable  
Upper explosion limit: Not applicable  
Self ignition: 392 °F  
Method: In a 400 ml wire basket (SIT 400)  
Ignition temperature: not tested.

**Hazardous combustion products:**

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)

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**Extinguishing media:** water spray jet  
 alcohol-resistant foam  
 carbon dioxide  
 dry powder

**Special fire fighting procedure:**  
 Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

**Unusual fire and explosion hazards:** Emits toxic fumes under fire conditions. This product presents no unusual fire or explosion hazards while sealed in a shipping container. During usage, if a dust cloud is generated, organic powders have the potential to be explosive with static spark or flame initiation.

**Section 06 - Accidental release measures**

**Steps to be taken in case of spill or leak:**  
 Wear proper protective equipment. Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Do not discharge into storm drains or the aquatic environment.

**Section 07 - Handling and storage**

**Advice on safe handling:**

Store in a dry area. Keep only in the original container at temperatures not exceeding 50 C.

**Further info on storage conditions:**

Store in original container.  
 Keep containers closed.

**Section 08 - Exposure controls / personal protection**

**Occupational exposure limits:**

Component	CAS number:	Regulatory list	Type of value	Values / Remarks
Particles (insoluble or poorly soluble)		US ACGIH Threshold Limit Values	Threshold Limit Value_Time Weighted Average	10 mg/m3
Particulates not otherwise regulated (PNOR)		US OSHA Table Z-1 Limits for Air Contaminants [29 CFR 1910.1000]	8-hour Time Weighted Averages	15 ppm; 15 mg/m3

**Respiratory protection:**

If airborne concentrations pose a health hazard, become irritating or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134



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<b>Hand protection:</b>	Butyl Rubber, PVC Or Neoprene.
<b>Eye protection:</b>	Splash-proof or dust-resistant goggles
<b>Other protective equipment:</b>	Protective clothing to minimize skin contact should be worn. Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.
<b>Advice on system design:</b>	Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.
<b>IDLH:</b>	Not Determined

**Section 09 - Physical and chemical properties**

<b>Form:</b>	Powder
<b>Color:</b>	white
<b>Odor:</b>	almost odourless
<b>Odor limit:</b>	not tested.
<b>pH:</b>	approx. 10 (20 °C, 1 g/l)
<b>Solubility in water:</b>	(20 °C) soluble
<b>Density:</b>	not tested.
<b>Melting point :</b>	not determined
<b>Boiling point :</b>	not determined
<b>Sublimation point :</b>	not determined
<b>Vapor pressure:</b>	Not applicable
<b>Relative vapor density:</b>	Not applicable
<b>Partitioning coef. octanol/water:</b>	not tested.
<b>Viscosity / (dynamic):</b>	not tested.

**Section 10 - Stability and reactivity**

<b>Thermal decomposition:</b>	274 °C (Heating rate:3 K/min) No decomposition if used as prescribed.
<b>Chemical stability:</b>	Under normal conditions the product is stable.
<b>Hazardous Polymerization:</b>	Will not occur. Conditions to avoid: None known.
<b>Conditions-to-avoid:</b>	None known.

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Version : 1 - 8 / USARevision Date: 02/28/2011  
Date of printing :07/26/2011**Section 11 - Toxicological information****Product information:**

Acute oral toxicity:	LD50 2,000 mg/kg (rat)
Acute oral toxicity:	LD50 approx. 2,000 mg/kg (mouse)
Acute inhalation toxicity:	not tested.
Acute dermal toxicity:	not tested.
Skin irritation:	Slightly irritating (rabbit)
Eye irritation:	Severe irritant (rabbit)

**Other relevant toxicity information:**

Inhalation of dust causes slight irritation of the respiratory tract.

**Section 12 - Ecological information****Product information:**

Biodegradation:	not tested.
Fish toxicity:	LC0 100 mg/l (48 h, <i>Leuciscus idus</i> )
Daphnia toxicity:	not tested.
Algae toxicity:	not tested.
Bacteria toxicity:	not tested.
Dissolved organic carbon (DOC):	not available
Chemical oxygen demand (COD):	not available
Biological oxygen demand (BOD):	not available

**Remarks:**

Do not allow to enter soil, waterways or waste water

**Section 13 - Disposal considerations****Waste disposal information:**

Recommended disposal is by incineration in approved facilities.

**RCRA hazardous waste:**No - Not as sold.  
RCRA number: NONE**Section 14 - Transport information**

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DOT	not restricted
IATA	not restricted
IMDG	not restricted

**Section 15 - Regulatory information****TSCA Status:**

This product is not listed on the Toxic Substances Control Act (TSCA) inventory. It can not be used for any commercial purposes except as a bonafide cosmetic or cosmetic adjuvant, additive, or ingredient; or for use in research and development under the supervision of a technically qualified individual to understand its potential hazards.

**SARA (section 311/312):**

Reactive hazard:	no
Pressure hazard:	no
Fire hazard:	no
Immediate/acute:	yes
Delayed/chronic:	no

**SARA 313 Information:**

This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

**Clean Water Act:**

Contains no known priority pollutants at concentrations greater than 0.1%.

**Volatile organic compounds VOC:**

Remarks: Not Available

**FDA:**

FDA regulated cosmetic ingredient.

**Section 16 - Other information****Other precautions:**

This product is not listed on the Toxic Substances Control Act (TSCA) inventory. It can not be used for any commercial purposes except as a bonafide cosmetic or cosmetic adjuvant, additive, or ingredient; or for use in research and development under the supervision of a technically qualified individual to understand its potential hazards. Observe all necessary precautions for handling powders as fine powder may present a dust explosion hazard.

**Label information:****CAUTION!**

IF A DUST CLOUD IS GENERATED DURING USAGE, ORGANIC POWDERS HAVE THE POTENTIAL TO BE EXPLOSIVE WITH STATIC SPARK OR FLAME INITIATION. CAUSES SEVERE EYE IRRITATION MAY IRRITATE UPPER RESPIRATORY TRACT. Prolonged contact with skin may cause slight irritation. This product is not in the TSCA inventory. It cannot be used for any commercial purposes except as a bonafide cosmetic or cosmetic adjuvant, additive or ingredient; or for use in Research and

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Development under the supervision of a technically qualified individual to understand its potential hazards.

Avoid breathing dust. Avoid contact with eyes, skin and clothing. Wear proper protective equipment. Keep container closed when not in use. Use with ventilation and/or respiratory protection to keep exposure to a minimum. Wash thoroughly after handling. Keep away from heat, sparks, and other sources of ignition.

Eye contact: flush with water for at least 15 minutes while holding eyelids open. Seek immediate medical attention. Skin contact: wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention. Wash contaminated clothing before reuse. Ingestion: if conscious, give the patient 1-2 glasses of water (8-16 oz.) Seek medical attention. Never give anything by mouth to an unconscious person. Induce vomiting only at the instructions of a doctor or nurse. Inhalation: remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

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This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.

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Printed on Nov 13/13 Cluj

**Brenntag Canada Inc.**



# MATERIAL SAFETY DATA SHEET

**WHITE MINERAL OIL (ALL GRADES)**

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Brenntag Canada Inc.  
43 Jutland Rd.  
Toronto, ON  
M8Z 2G6  
(416) 259-8231

WHMIS#: 00060910  
Index: GCD1114/13B  
Effective Date: 2013 May 23  
Date of Revision: 2013 July 17

Website: <http://www.brenntag.ca>

### EMERGENCY TELEPHONE NUMBER (For Emergencies Involving Chemical Spills or Releases)

1 855 273 6824

### PRODUCT IDENTIFICATION

Product Name: White Mineral Oil (All Grades).  
Chemical Name: Severely Hydrotreated Paraffinic White Mineral Oil.  
Synonyms: Paraffinic White Oil;  
Primol 352, N352;  
Puretol 7, 7S, 9, 10, 13, 15, 19, 21, 22, 35, 55, PSO 300;  
Purity FG WO White Mineral Oil;  
Krystal 550, 350, 70.  
Chemical Family: Paraffinic Mineral Oil.  
Molecular Formula: Not available.  
Product Use: Lubricant Additive.  
WHMIS Classification / Symbol:  
Not WHMIS Regulated.



READ THE ENTIRE MSDS FOR THE COMPLETE HAZARD EVALUATION OF THIS PRODUCT.

## 2. COMPOSITION, INFORMATION ON INGREDIENTS (Not Intended As Specifications)

Ingredient	CAS#	ACGIH TLV (TWA)	% Concentration
White Mineral Oil	8042-47-5	(5 mg/m <sup>3</sup> (l))	80 - 100

## 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Low hazard for usual industrial or commercial handling. See "Other Health Effects" Section. Can decompose at high temperatures forming toxic gases. Contents may develop pressure on prolonged exposure to heat.

### POTENTIAL HEALTH EFFECTS

**Inhalation:** Vapours or mists, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose and throat, headache, nausea and drowsiness. See "Other Health Effects" Section.

<b>Skin Contact:</b>	This product is non-irritating upon contact. Prolonged, confined (especially under the finger nails, under rings or watch bands) or repeated exposure may cause skin irritation. May cause defatting, drying and cracking of the skin. Prolonged and repeated contact may lead to dermatitis.
<b>Skin Absorption:</b>	Not likely to be absorbed through the skin.
<b>Eye Contact:</b>	This product may cause mild, transient irritation.
<b>Ingestion:</b>	This product may cause mild gastrointestinal discomfort.
<b>Other Health Effects:</b>	Effects (irritancy) on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential.  Exposure to a large single dose, or repeated small doses of (white) mineral oil by inhalation, aspiration or ingestion leading to aspiration can lead to lipid pneumonia or lipid granuloma. These are low-grade, chronic, localized tissue reactions which are not fatal. Shortness of breath and cough are the most common symptoms. Ingestion is relatively non-toxic unless aspiration occurs. Laxative properties of this product may result in abdominal cramps and diarrhea. This product has a low vapour pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product.

## 4. FIRST AID MEASURES

### FIRST AID PROCEDURES

<b>Inhalation:</b>	If respiratory problems arise, move the victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical advice IMMEDIATELY.
<b>Skin Contact:</b>	Flush skin with running water for a minimum of 15 minutes. Start flushing while removing contaminated clothing. If irritation, redness, or a burning sensation develops and persists, obtain medical attention.
<b>Eye Contact:</b>	Immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention.
<b>Ingestion:</b>	Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. DO NOT induce vomiting. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Obtain medical attention IMMEDIATELY.
<b>Note to Physicians:</b>	This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Medical conditions that may be aggravated by exposure to this product include diseases of the skin, eyes or respiratory tract.

## 5. FIRE-FIGHTING MEASURES

<b>Flashpoint (°C)</b>	<b>Autoignition Temperature (°C)</b>	<b>Flammability Limits in Air (%):</b>	
		<b>LEL</b>	<b>UEL</b>
> 170 (3)	Not available.	Not available.	Not available.
<b>Flammability Class (WHMIS):</b>	Not regulated.		
<b>Hazardous Combustion Products:</b>	Thermal decomposition products are toxic and may include oxides of carbon and organic vapours.		
<b>Unusual Fire or Explosion Hazards:</b>	Do not direct a solid stream of foam into hot, burning pools. This may cause spattering and increase fire intensity. Closed containers exposed to heat may burst. Spilled material may cause floors and contact surfaces to become slippery.		
<b>Sensitivity to Mechanical Impact:</b>	Not expected to be sensitive to mechanical impact.		
<b>Rate of Burning:</b>	Not available.		
<b>Explosive Power:</b>	Not available.		
<b>Sensitivity to Static Discharge:</b>	Not expected to be sensitive to static discharge.		
<b>EXTINGUISHING MEDIA</b>			
<b>Fire Extinguishing Media:</b>	Foam. Use carbon dioxide or dry chemical media for small fires. If only water is available, use it in the form of a fog.		

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## FIRE FIGHTING INSTRUCTIONS

**Instructions to the Fire Fighters:** Isolate materials that are not involved in the fire and protect personnel. The heat from a fire can cause a build-up of pressure inside the containers which may rupture. Cool containers with flooding quantities of water until well after the fire is out. (4) Spilled material may cause floors and contact surfaces to become slippery.

**Fire Fighting Protective Equipment:** Use self-contained breathing apparatus and protective clothing.

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## 6. ACCIDENTAL RELEASE MEASURES

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases, which change from region to region.

**Containment and Clean-Up Procedures:** In all cases of leak or spill contact vendor at Emergency Number shown on the front page of this MSDS. Wear protective clothing. Do not use combustible materials such as sawdust as an absorbent. Recover spilled material on non-combustible absorbents, such as sand or vermiculite, and place in covered containers for disposal. Collect product for recovery or disposal. For release to land, or storm water runoff, contain discharge by constructing dykes or applying inert absorbent; for release to water, utilize damming and/or water diversion to minimize the spread of contamination. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment. Spilled material may cause floors and contact surfaces to become slippery.

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## 7. HANDLING AND STORAGE

### HANDLING

**Handling Practices:** Use normal "good" industrial hygiene and housekeeping practices. Containers exposed to heat may be under internal pressure. These should be cooled and carefully vented before opening. A face shield and apron should be worn. Vent container frequently, and more often in warm weather, to relieve pressure.

**Ventilation Requirements:** General exhaust is acceptable. Do not use pressure to empty containers.

**Other Precautions:** Use only with adequate ventilation and avoid breathing aerosols ( vapours or mists ). Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

### STORAGE

**Storage Temperature (°C):** See below.

**Ventilation Requirements:** General exhaust is acceptable.

**Storage Requirements:** Store in a cool, well-ventilated area. Keep away from heat, sparks and flames. Keep containers closed. Do not expose sealed containers to temperatures above 40° C.

**Special Materials to be Used for Packaging or Containers:** Confirm suitability of any material before using.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

### ENGINEERING CONTROLS

**Engineering Controls:** General exhaust is acceptable. Local exhaust ventilation preferred. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense vapours may collect.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Eye Protection:** Safety glasses with side shields are recommended to prevent eye contact. Use chemical safety goggles when there is potential for eye contact. Contact lenses should not be worn when working with this material.

**Skin Protection:** Gloves and protective clothing made from polyvinyl alcohol (PVA), viton, neoprene or nitrile rubber should be impervious under conditions of use. Prior to use, user should confirm impermeability. Discard contaminated gloves.

**Respiratory Protection:** No specific guidelines available. Respiratory protection should not be necessary unless the material is heated or a mist created. Do not use compressed oxygen in hydrocarbon atmospheres. A NIOSH/MSHA-approved air-purifying respirator equipped with organic vapour cartridges for concentrations up to 50 mg/m<sup>3</sup> oil mist. An air-supplied respirator if concentrations are higher or unknown.

**Other Personal Protective Equipment:** Wear regular work clothing. The use of coveralls is recommended. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

**EXPOSURE GUIDELINES**

SUBSTANCE	ACGIH TLV	OSHA PEL		NIOSH REL	
	(STEL)	(TWA)	(STEL)	(TWA)	(STEL)
White Mineral Oil	---	5 mg/m <sup>3</sup> Oil Mist	---	5 mg/m <sup>3</sup> Oil Mist	10 mg/m <sup>3</sup> Oil Mist

**9. PHYSICAL AND CHEMICAL PROPERTIES (Not intended as Specifications)**

**Physical State:** Liquid.

**Appearance:** Clear, colourless liquid.

**Odour:** Odourless.

**Odour Threshold (ppm):** Not available.

**Boiling Range (°C):** > 260.

**Melting/Freezing Point (°C):** Not available.

**Vapour Pressure (mm Hg at 20° C):** Negligible.

**Vapour Density (Air = 1.0):** > 1.0.

**Relative Density (g/cc):** 0.84 - 0.88.

**Bulk Density:** Not available.

**Viscosity:** Not available.

**Evaporation Rate (Butyl Acetate = 1.0):** Not available.

**Solubility:** Not soluble in water. Soluble in hydrocarbons.

**% Volatile by Volume:** Negligible.

**pH:** Not available.

**Coefficient of Water/Oil Distribution:** > 3.5.

**Volatile Organic Compounds (VOC):** Not available.

**Flashpoint (°C):** > 170 (3)

**10. STABILITY AND REACTIVITY**

**CHEMICAL STABILITY**

**Under Normal Conditions:** Stable.

**Under Fire Conditions:** Flammable. Material will not burn unless preheated.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Formation of oil mist. High temperatures, sparks, open flames and all other sources of ignition.

**Materials to Avoid:** Oxidizing agents. Lewis or mineral acids. Materials reactive with hydroxyl bearing compounds.

**Decomposition or Combustion Products:** Thermal decomposition products are toxic and may include oxides of carbon and organic vapours.

**11. TOXICOLOGICAL INFORMATION**

**TOXICOLOGICAL DATA:**

SUBSTANCE	LD50 (Oral, Rat)	LD50 (Dermal, Rabbit)	LC50 (Inhalation, Rat, 4h)
White Mineral Oil	> 5 000 mg/kg (1,3)	> 2 000 mg/kg (3)	> 5.2 mg/L (3)

**Carcinogenicity Data:** The ingredient(s) of this product is (are) not classed as carcinogenic by ACGIH, IARC, OSHA or NTP.

**Reproductive Data:** No adverse reproductive effects are anticipated.



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Mutagenicity Data:	No adverse mutagenic effects are anticipated.
Teratogenicity Data:	No adverse teratogenic effects are anticipated.
Respiratory / Skin Sensitization Data:	None known.
Synergistic Materials:	None known.
Other Studies Relevant to Material:	None known.

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## 12. ECOLOGICAL INFORMATION

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Ecotoxicity:	Not available. May be harmful to aquatic life.
Environmental Fate:	Not readily biodegradable. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

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## 13. DISPOSAL CONSIDERATIONS

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Deactivating Chemicals:	None required.
Waste Disposal Methods:	This information applies to the material as manufactured. Reevaluation of the product may be required by the user at the time of disposal since the product uses, transformations, mixtures and processes may influence waste classification. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.
Safe Handling of Residues:	See "Waste Disposal Methods".
Disposal of Packaging:	Empty containers retain product residue. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. Dispose of waste material at an approved waste incineration facility in accordance with applicable local, provincial and federal regulations.

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## 14. TRANSPORTATION INFORMATION

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### CANADIAN TDG ACT SHIPPING DESCRIPTION:

This product is not regulated by TDG.  
Label(s): Not applicable. Placard: Not applicable.  
ERAP Index: ----. Exemptions: None known.

### US DOT CLASSIFICATION (49CFR 172.101, 172.102):

This product is not regulated by DOT.  
Label(s): Not applicable. Placard: Not applicable.  
CERCLA-RQ: Not available. Exemptions: None known.

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## 15. REGULATORY INFORMATION

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### CANADA

CEPA - NSNR: This material is included on the DSL under the CEPA.  
CEPA - NPRI: Not included.  
Controlled Products Regulations Classification (WHMIS):

### USA

Environmental Protection Act: This material is included on the TSCA Inventory.  
OSHA HCS (29CFR 1910.1200): Not regulated.  
NFPA: 1 Health, 1 Fire, 0 Reactivity (3)  
HMIS: 1 Health, 1 Fire, 0 Reactivity (3)

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## INTERNATIONAL

All components of this product are found on the following inventories: EINECS (European Inventory of Existing Commercial Chemical Substances).

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## 16. OTHER INFORMATION

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### REFERENCES

1. RTECS-Registry of Toxic Effects of Chemical Substances, Canadian Centre for Occupational Health and Safety RTECS database.
2. Clayton, G.D. and Clayton, F.E., Eds., Patty's Industrial Hygiene and Toxicology, 3rd ed., Vol. IIA,B,C, John Wiley and Sons, New York, 1981.
3. Supplier's Material Safety Data Sheet(s).
4. CHEMINFO chemical profile, Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
5. Guide to Occupational Exposure Values, 2011, American Conference of Governmental Industrial Hygienists, Cincinnati, 2011.
6. Regulatory Affairs Group, Brenntag Canada Inc.
7. The British Columbia Drug and Poison Information Centre, Poison Managements Manual, Canadian Pharmaceutical Association, Ottawa, 1981.

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The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Brenntag Canada Inc. will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years.

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To obtain revised copies of this or other Material Safety Data Sheets, contact your nearest Brenntag Canada Regional office.

British Columbia: 20333-102B Avenue, Langley, BC, V1M 3H1  
Phone: (604) 513-9009 Facsimile: (604) 513-9010

Alberta: 6628 - 45 th. Street, Leduc, AB, T9E 7C9  
Phone: (780) 986-4544 Facsimile: (780) 986-1070

Manitoba: 681 Plinquet Street, Winnipeg, MB, R2J 2X2  
Phone: (204) 233-3416 Facsimile: (204) 233-7005

Ontario: 43 Jutland Road, Toronto, ON, M8Z 2G6  
Phone: (416) 259-8231 Facsimile: (416) 259-5333

Quebec: 2900 Jean Baptiste Des., Lachine, PQ, H8T 1C8  
Phone: (514) 636-9230 Facsimile: (514) 636-0877

Atlantic: A-105 Akerley Boulevard, Dartmouth, NS, B3B 1R7  
Phone: (902) 468-9690 Facsimile: (902) 468-3085

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Prepared By: Regulatory Affairs Group, Brenntag Canada Inc., (416) 259-8231.



# MATERIAL SAFETY DATA SHEET

CODE # 8000  
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## SECTION I - PRODUCT INFORMATION

**PRODUCT IDENTIFIER** : **POTASSIUM IODIDE USP / FCC**  
**CHEMICAL NAME AND SYNONYMS** : Hydriodic acid, potassium salt  
**IDENTIFICATION NUMBER** : Not regulated  
**PRODUCT USE** : Pharmaceuticals, dietary source of iodine, industrial use

*Conf Nov 13/13*

**SUPPLIER** : B.G.R. Chemical Products Inc.  
**ADDRESS** : 600 Delmar Avenue  
 Pointe-Claire, QC  
 H9R 4A8  
**TELEPHONE** : (514) 694-7442

**EMERGENCY:** Newalta Industrial Services Inc.  
 24H NUMBER : 1-800-567-7455

## SECTION II - HAZARDS IDENTIFICATION



Class D2A

**DANGER!** Causes skin and eye irritation. Harmful if inhaled or swallowed. Dust is irritating to respiratory tract.  
 May cause teratogenic effects. Can cause adverse reproductive effects.

## SECTION III - HAZARDOUS INGREDIENTS

INGREDIENT	SYNONYMS	CAS NUMBER	CONCENTRATION*
Potassium Iodide	Potassium monoiodide Hydriodic acid, potassium salt	7681-11-0	90 - 100 %

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## SECTION IV - FIRST AID

**EYES:** Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.

**SKIN:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing.

**INHALATION:** Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.

**INGESTION:** If conscious, wash out with mouth with water. Have conscious person drink 2-3 glasses of milk or water (less effective). DO NOT induce vomiting. DO NOT give acidic agents, this may cause an exothermic reaction and burn the oesophagus. Never give anything by mouth to an unconscious or convulsing person. Call a physician.

**NOTE TO PHYSICIAN:** Treat symptomatically. May cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis

## SECTION V - FIRE FIGHTING MEASURES

**EXTINGUISH MEDIA:** Use extinguish media appropriate for surrounding materials.

**UNSUITABLE EXTINGUISH MEDIA:** Not applicable

**SPECIFIC HAZARD:** Spilled material may cause floors and contact surfaces to become slippery.

**HAZARDOUS COMBUSTION PRODUCTS:** oxides of potassium, hydrogen iodide, iodine fumes.

**SPECIAL PROTECTIVE EQUIPMENT:** Use self-contained breathing apparatus and full protective clothing

**FIRE FIGHTING INSTRUCTIONS:** Fire-exposed containers should be kept cool by spraying with water to reduce pressure.



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## SECTION VI - ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear respirator, protective clothing, and gloves.

**ENVIRONMENTAL PRECAUTIONS:** Do not flush into sewers or waterways

**CLEANUP PROCEDURE:** Dike or contain spill. Sweep up and place in an approved container. Clean up residues with water. Ventilate spill area.

## SECTION VII - HANDLING AND STORAGE

**HANDLING:** Do not breathe mists. Do not ingest. Do not get in eyes, on skin, or on clothing. Wash well after use. Do not allow smoking and food consumption while handling. Sweep up immediately to eliminate slipping hazard.

**STORAGE:** Store in a cool, dry and well ventilated area. Keep container tightly closed. Keep away from heat, sparks and flame. Protect against physical damage. Store away from incompatible materials.

**STORAGE INCOMPATIBILITY:** Attacks metals in presence of moisture.

## SECTION VIII - PERSONAL EXPOSURE CONTROL

### EXPOSURE LIMITS:

CHEMICAL NAME	TYPE	EXPOSURE LIMIT	SOURCE
Potassium Iodide	TWA*	Not available	Not available
	STEL**	Not available	Not available

\* TWA: Time-weighted average

\*\*STEL: Short term exposure limit

**ENGINEERING CONTROLS:** Local exhaust ventilation is recommended.

**PROTECTIVE CLOTHING:** Wear an impermeable apron and boots.

**HAND PROTECTION:** Wear neoprene, butyl rubber, natural rubber, nitrile rubber gloves. Prior to use, user should confirm impermeability.

**EYE PROTECTION:** Chemical safety goggles are recommended. Contact lenses should not be worn when working with this material.

**RESPIRATORY PROTECTION:** No specific guidelines available. Wear a NIOSH approved equipment according to the concentrations.

**OTHER PROTECTIVE EQUIPMENT:** Ensure that eyewash station and safety shower is proximal to the work-station location.

## SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Solid	VAPOR PRESSURE	Not available
COLOR AND ODOR	White, Odorless	VAPOR DENSITY (air = 1)	Not available
ODOR THRESHOLD	Not available	SPECIFIC GRAVITY (water = 1)	3.1
pH (water = 7)	6 - 9 (5% solution)	SOLUBILITY	Water, ethyl alcohol, methanol, acetone
MELTING / FREEZING POINT	680°C	FLAMMABILITY	Not flammable
BOILING POINT	1330°C	FLASH POINT	Not available
DECOMPOSITION TEMPERATURE	Not available	AUTO-IGNITION TEMPERATURE	Not available
EVAPORATION RATE (n-butylacetate = 1)	Not available	LOWER FLAMMABLE LIMIT	Not available
PARTITION COEFFICIENT n-octanol / water	Not available	UPPER FLAMMABLE LIMIT	Not available



**SECTION X - STABILITY AND REACTIVITY**

**CHEMICAL STABILITY:** Stable

**INCOMPATIBLE MATERIALS:** Strong oxidizers, acids, salts of metals, potassium chlorate, perchlorates, diazonium salts, tartaric acid, metals, bromine and chlorine trifluorides and perchlorates.

**CONDITIONS TO AVOID:** Avoid high temperatures, sparks, open flames and all other sources of ignition. On long exposure to air becomes yellow due to the release of iodine. Air sensitive. Avoid moisture contamination.

**HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

**MECHANICAL IMPACT SENSITIVITY:** No

**STATIC DISCHARGE SENSITIVITY:** No

**VIBRATION SENSITIVITY:** Not available

**HAZARDOUS DECOMPOSITION PRODUCTS:** oxides of potassium, hydrogen iodide, iodine fumes.

**SECTION XI - TOXICOLOGICAL PROPERTIES**

**ROUTES OF ENTRY:** Inhalation and ingestion. Eye contact. Skin contact.

**ACUTE HEALTH EFFECTS:**

**SKIN CONTACT:** May cause drying of the skin due to absorption of moisture and oils. In the presence of moisture (perspiration, humidity, tears) the dust dissolves to form a solution which may cause burns. May cause skin sensitization.

**EYE CONTACT:** Cause severe irritation with redness and pain, lachrymation and conjunctivitis.

**INHALATION:** Irritating to the nose, throat and respiratory tract. May cause coughing and sneezing, shortness of breath.

**INGESTION:** Causes severe burning and pain in the mouth, throat and abdomen. Vomiting, diarrhea and perforation of the oesophagus and stomach may occur.

**CHRONIC HEALTH EFFECTS:**

**SKIN CONTACT:** Not available

**EYE CONTACT:** Not available

**INHALATION:** Prolonged or repeated exposure may cause headache, weakness, thyroid effects, anemia, goiter, iodism (salivation, weakness, sneezing, lacrimation) and central nervous system depression.

**INGESTION:** Not available

CARCINOGENICITY	Not available	MUTAGENICITY	Not available
TERATOGENICITY	Possible	REPRODUCTIVE TOXICITY	Possible

**TOXICITY DATAS:**

CHEMICAL NAME	LD 50 - (rat - oral)	LC 50 - (rat - inh)
Potassium iodide	4800 mg/kg	Not available



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## SECTION XII - ECOLOGICAL INFORMATION

**ECOTOXICITY:** Not available. May be harmful to aquatic life at low concentrations.

**PERSISTENCE AND DEGRADABILITY:** Not available

**BIOACCUMULATIVE POTENTIAL:** Not available

**MOBILITY IN SOIL:** Not available

**OTHER HAZARDOUS EFFECTS:** Not available

## SECTION XIII - DISPOSAL CONSIDERATIONS

**GENERAL INFORMATION:** Dispose of in accordance with federal, provincial and local regulation.

**DISPOSAL METHODS:** Dispose of waste material at an approved waste treatment/disposal facility. Do not dispose of waste with normal garbage, or to sewer systems. Empty containers may retain product residue and can be hazardous. Treat package in the same manner as the product.

## SECTION XIV - TRANSPORT INFORMATION

SHIPPING NAME	HAZARD CLASS	UN NUMBER	PACKING GROUP
Potassium Iodide USP / FCC	Not regulated	Not regulated	Not regulated

**MARINE POLLUTANT:** Not available

**SPECIAL INSTRUCTIONS:** Not available

## SECTION XV - REGULATORY INFORMATION

**CANADA:CEPA - NSNR:** This material is included on the DSL under the CEPA

## SECTION XVI - PREPARATION INFORMATION

**PREPARED BY :** B G R. Chemical Products Inc.  
**TELEPHONE :** (514) 694-7442  
**MODIFICATIONS :** MSDS with 16 sections

**IMPORTANT:** The Information presented herein is believed to be accurate and is offered only as a guide. Users should make their own tests to determine the suitability of these products for their own particular purposes. Users assume all risk of use, storage and handling of the product. No warranty, express or implied, is made including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be construed as a license to operate under, or recommendation to infringe any patents.

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## NIPASOL M SODIUM

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Substance key: 000000055958  
Version : 1 - 4 / USA

Revision Date: 11/11/2010  
Date of printing :07/26/2011

*Nov 13/13 Conf*

### Section 01 - Product Information

<b>Identification of the company:</b>	Clariant Production UK Ltd Unit 2, Rawdon Park Yeadon, LEEDS, LS19 7BA Telephone No.: +44 113 239 7920
<b>Information of the substance/preparation:</b>	Product Safety 1-704-331-7710 Emergency tel. number: +1 800-424-9300 CHEMTREC

**Trade name:** NIPASOL M SODIUM  
**CAS number:** 35285-69-9  
**Synonyms:** NIPASOL M SODIUM n.p.  
**Chemical family:**  
**Primary product use:** Personal Care Preservatives  
**Chemical family:** sodium propyl-4-hydroxybenzoate

### Section 02 - Composition information on hazardous ingredients

#### Hazardous Ingredients:

Component	CAS-no. (Trade secret no.)	Concentration
Sodium Propyl-4-Hydroxybenzoate	35285-69-9	> 99 %

### Section 03 - Hazards identification

**Emergency overview:** White powder  
Eye Irritant.  
Skin Irritant.  
Respiratory irritant.  
May cause dust explosions.

**Expected Route of entry:**

**Inhalation:** Particulates of this material are probably irritating to respiratory passages, nose, and throat.  
Product causes slight irritation  
May cause severe irritation.

**Skin contact:** In humans, irritation of the mouth, pharynx, esophagus, and stomach can develop following ingestion of this material.

**Eye contact:**

**Ingestion:**

**Known effects on other illnesses:** No known effects on other illnesses for this product.

**Listed carcinogen:** IARC: No  
NTP: No

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OSHA: No  
Other: No

**HMIS:**

Health: 2

Flammability: 1

Reactivity: 0

Personal protection: E

### Section 04 - First aid measures

**After inhalation:**

Get victim to fresh air. Give artificial respiration or oxygen if breathing has stopped. Get prompt medical attention. Do not give fluids if victim is unconscious.

**After contact with skin:**

Wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention.

**After contact with eyes:**

Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.

**After ingestion:**

If ingested, seek medical assistance immediately.

**Advice to doctor / Treatment:**

None known.

### Section 05 - Fire fighting measures

**Flashpoint:** Not applicable

**Lower explosion limit:** Not applicable

**Upper explosion limit:** Not applicable

**Upper explosion limit:** Not applicable

**Ignition temperature:** not tested.

**Hazardous combustion products:**

In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)  
Carbon dioxide (CO<sub>2</sub>)

**Extinguishing media:** water spray jet  
alcohol-resistant foam  
carbon dioxide  
dry powder

**Special fire fighting procedure:**

Exercise caution when fighting any chemical fire. Use NIOSH approved self-contained breathing apparatus and full protective clothing.

**Unusual fire and explosion hazards:**

Emits toxic fumes under fire conditions. This product presents no unusual fire or explosion hazards while sealed in a shipping container. During usage, if a dust cloud is generated, organic powders have the potential to be explosive with static spark or flame initiation.



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**Section 06 - Accidental release measures**

**Steps to be taken in case of spill or leak:**

Wear proper protective equipment. Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Do not discharge into storm drains or the aquatic environment.

**Section 07 - Handling and storage**

**Advice on safe handling:**

Store in a dry area. Keep only in the original container at temperatures not exceeding 50 C.

**Further info on storage conditions:**

Store in original container.  
 Keep containers closed.

**Section 08 - Exposure controls / personal protection**

**Occupational exposure limits:**

Component	CAS number:	Regulatory list	Type of value	Values / Remarks
Particles (insoluble or poorly soluble)		US ACGIH Threshold Limit Values	Threshold Limit Value_Time Weighted Average	10 mg/m3
Particulates not otherwise regulated (PNOR)		US OSHA Table Z-1 Limits for Air Contaminents [29 CFR 1910.1000]	8-hour Time Weighted Averages	15 ppm; 15 mg/m3

**Respiratory protection:**

If airborne concentrations pose a health hazard, become irritating or exceed recommended limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements under 29 CFR 1910.134

**Hand protection:**

Butyl Rubber, PVC Or Neoprene.

**Eye protection:**

Splash-proof or dust-resistant goggles

**Other protective equipment:**

Protective clothing to minimize skin contact should be worn. Chemically resistant safety shoes. Wash contaminated clothing with soap and water and dry before reuse. Safety showers and eyewash stations should be provided in all areas where this material is handled.

**Advice on system design:**

Use adequate exhaust ventilation and/or dust collection to keep dust levels below exposure limits.

**IDLH:**

Not Determined

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Date of printing :07/26/2011**Section 09 - Physical and chemical properties**

<b>Form:</b>	Powder
<b>Color:</b>	white
<b>Odor:</b>	almost odourless
<b>Odor limit:</b>	not tested.
<b>pH:</b>	approx. 10 (20 °C, 1 g/l)
<b>Solubility in water:</b>	(20 °C) soluble
<b>Density:</b>	not tested.
<b>Melting point :</b>	not determined
<b>Boiling point :</b>	not determined
<b>Sublimation point :</b>	not determined
<b>Vapor pressure:</b>	Not applicable
<b>Relative vapor density:</b>	Not applicable
<b>Partitioning coef. octanol/water:</b>	not tested.
<b>Viscosity / (dynamic):</b>	not tested.

**Section 10 - Stability and reactivity**

<b>Thermal decomposition:</b>	273 °C (Heating rate:3 K/min) No decomposition if used as prescribed.
<b>Chemical stability:</b>	Under normal conditions the product is stable.
<b>Hazardous Polymerization:</b>	Will not occur. Conditions to avoid: None known.
<b>Conditions to avoid:</b>	None known.

**Section 11 - Toxicological information**

<b>Product information:</b>	
<b>Acute oral toxicity:</b>	LD50 > 2,000 mg/kg (mouse)
<b>Acute inhalation toxicity:</b>	not tested.
<b>Acute dermal toxicity:</b>	not tested.
<b>Skin irritation:</b>	Slightly irritating (rabbit)
<b>Eye irritation:</b>	Severe irritant (rabbit)

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**Other relevant toxicity information:**  
Inhalation of dust causes slight irritation of the respiratory tract.

**Section 12 - Ecological information****Product Information:**

**Biodegradation:** The product is biodegradable.  
**Fish toxicity:** LC50 > 100 mg/l (Fish general (Pisces))  
Method: evaluated  
**Daphnia toxicity:** not tested.  
**Algae toxicity:** not tested.  
**Bacteria toxicity:** not tested.  
**Dissolved organic carbon (DOC):** not available  
**Chemical oxygen demand (COD):** not available  
**Biological oxygen demand (BOD):** not available

**Remarks:**

Do not allow to enter soil, waterways or waste water

**Section 13 - Disposal considerations****Waste disposal information:**

Recommended disposal is by incineration in approved facilities.

**RCRA hazardous waste:**No – Not as sold.  
RCRA number: NONE**Section 14 - Transport information**

**DOT** not restricted  
**IATA** not restricted  
**IMDG** not restricted

**Section 15 - Regulatory information****TSCA Status:**

The product is not listed in TSCA. However, it is excluded from the regulation because it is a cosmetic raw material and it is permitted for that use.

**SARA (section 311/312):**

Reactive hazard: no

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Pressure hazard:	no
Fire hazard:	no
Immediate/acute:	yes
Delayed/chronic:	no

**SARA 313 Information:**

This product does not contain any toxic chemical listed under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986.

**Clean Water Act:**

Contains no known priority pollutants at concentrations greater than 0.1%.

**Volatile organic compounds VOC:**

Remarks: Not Available

**FDA:**

FDA regulated cosmetic ingredient.

**Section 16 - Other information****Other precautions:**

This product is not listed on the Toxic Substances Control Act (TSCA) inventory. It can not be used for any commercial purposes except as a bonafide cosmetic or cosmetic adjuvant, additive, or ingredient; or for use in research and development under the supervision of a technically qualified individual to understand its potential hazards. Observe all necessary precautions for handling powders as fine powder may present a dust explosion hazard.

**Label information:****CAUTION!**

This product is not in the TSCA inventory. It cannot be used for any commercial purposes except as a bona fide cosmetic or cosmetic adjuvant, additive or ingredient; or for use in Research and Development under the supervision of a technically qualified individual to understand its potential hazards. May cause severe eye irritation with the possibility of eye damage. Prolonged contact with skin may cause slight irritation. **MAY IRRITATE UPPER RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED IF A DUST CLOUD IS GENERATED DURING USAGE, ORGANIC POWDERS HAVE THE POTENTIAL TO BE EXPLOSIVE WITH STATIC SPARK OR FLAME INITIATION.**

Avoid breathing dust. Avoid contact with eyes, skin and clothing. Wear proper protective equipment. Keep container closed when not in use. Use with ventilation and/or respiratory protection to keep exposure to a minimum. Wash thoroughly after handling. Keep away from heat, sparks, and other sources of ignition.

Eye contact: flush with water for at least 15 minutes while holding eyelids open. Seek immediate medical attention. Skin contact: wash thoroughly with soap and water for 15 minutes. If skin irritation occurs, seek medical attention. Wash contaminated clothing before reuse. Ingestion: if conscious, give the patient 1-2 glasses of water (8-16 oz.) Seek medical attention. Never give anything by mouth to an unconscious person. Induce vomiting only at the instructions of a doctor or nurse. Inhalation: remove to

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fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

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This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.



# Material Safety Data Sheet

Dow Chemical Canada ULC

Product Name: PROPYLENE GLYCOL USP/EP

Issue Date: 2011.10.10

Print Date: 14 Nov 2013 *Cref Nov 14/13*

Dow Chemical Canada ULC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

## 1. Product and Company Identification

Product Name

PROPYLENE GLYCOL USP/EP

### COMPANY IDENTIFICATION

Dow Chemical Canada ULC  
A Subsidiary of The Dow Chemical Company  
Suite 2100  
450 - 1<sup>st</sup> Street S.W  
Calgary, AB T2P 5H1  
Canada

For MSDS updates and Product Information: 800-258-2436

Prepared By: Prepared for use in Canada by EH&S, Hazard Communications.  
Revision: 2011.10.10  
Print Date: 11/14/2013

Customer Information Number: 800-258-2436  
[SDSQuestion@dow.com](mailto:SDSQuestion@dow.com)

### EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: (989) 636-4400  
Local Emergency Contact: 989-636-4400

## 2. Hazards Identification

### Emergency Overview

Color: Colorless

Physical State: Liquid.

Odor: Odorless

Hazards of product:

No significant immediate hazards for emergency response are known.

®(TM)\*Trademark

**Potential Health Effects**

**Eye Contact:** May cause slight temporary eye irritation. Corneal injury is unlikely. Mist may cause eye irritation.

**Skin Contact:** Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.

**Skin Absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.

**Inhalation:** At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

**Ingestion:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

**Aspiration hazard:** Based on physical properties, not likely to be an aspiration hazard.

**Effects of Repeated Exposure:** In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

### 3. Composition/information on ingredients

Component	CAS #	Amount W/W
Propylene glycol	57-55-6	> 99.8 %

Amounts are presented as percentages by weight.

### 4. First-aid measures

**Description of first aid measures**

**General advice:** If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air; if effects occur, consult a physician.

**Skin Contact:** Wash skin with plenty of water.

**Eye Contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** No emergency medical treatment necessary.

**Most important symptoms and effects, both acute and delayed**

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

**Indication of immediate medical attention and special treatment needed**

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. Fire Fighting Measures

**Suitable extinguishing media**

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Extinguishing Media to Avoid:** Do not use direct water stream. May spread fire.

**Special hazards arising from the substance or mixture**

**Hazardous Combustion Products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

**Special Protective Equipment for Firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

See Section 9 for related Physical Properties

## 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Any absorbent material. Collect in suitable and properly labeled open containers. Wash the spill site with large quantities of water. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

## 7. Handling and Storage

### Handling

**General Handling:** Product handled hot may require additional ventilation or local exhaust. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Other Precautions:** Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

### Storage

Store away from direct sunlight or ultraviolet light. Keep container tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture. Store in the following material(s): Stainless steel. Aluminum. Container lined with phenolic or epoxy-phenolic FDA food contact approved coating. 316 stainless steel. Opaque HDPE plastic container.

<b>Shelf life: Use within</b>	<b>Maximum storage temperature</b>
24 Months	40 °C

## 8. Exposure Controls / Personal Protection

### Exposure Limits

Component	List	Type	Value
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Propylene glycol	WEEL	TWA	10 mg/m3
	CAD ON OEL	Aerosol. TWA EV Total vapor and aerosol.	155 mg/m3 50 ppm

Consult local authorities for recommended exposure limits.

### Personal Protection

**Eye/Face Protection:** Use safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

**Skin Protection:** No precautions other than clean body-covering clothing should be needed.

**Hand protection:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

**Respiratory Protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Ingestion:** Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

### Engineering Controls

**Ventilation:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

## 9. Physical and Chemical Properties

### Appearance

Physical State	Liquid.
Color	Colorless
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting Point	< -20 °C EU Method A.1 (Melting/ Freezing Temperature)
Freezing Point	< -20 °C EC Method A1
Boiling Point (760 mmHg)	184 °C EU Method A.2 (Boiling Temperature) .
Flash Point - Closed Cup	104 °C EC Method A9 (PMCC)
Flash Point - Open Cup	No test data available
Evaporation Rate (Butyl Acetate = 1)	0.01 Estimated.
Flammability (solid, gas)	Not applicable to liquids
Flammable Limits In Air	Lower: 2.6 %(V) Estimated. Upper: 12.5 %(V) Estimated.
Vapor Pressure	20 Pa @ 25 °C EC Method A4
Vapor Density (air = 1)	2.62 Literature
Specific Gravity (H2O = 1)	1.03 20 °C/20 °C EU Method A.3 (Relative Density)
Solubility in water (by weight)	100 % @ 20 °C EU Method A.6 (Water Solubility)
Partition coefficient, n-octanol/water (log Pow)	-1.07 EU Method A.8 (Partition Coefficient)
Autoignition Temperature	100.01 kPa > 400 °C EC Method A15
Decomposition Temperature	No test data available
Dynamic Viscosity	43.4 mPa.s @ 25 °C Literature
Kinematic Viscosity	No test data available
Explosive properties	Not explosive

<b>Oxidizing properties</b>	No
<b>Liquid Density</b>	1.03 g/cm <sup>3</sup> @ 20 °C <i>Literature</i>
<b>Solubility in Solvents</b>	No test data available
<b>Pour point</b>	< -57 °C <i>Literature</i>
<b>Henry's Law Constant (H)</b>	1.2E-08 atm*m <sup>3</sup> /mole Measured

## 10. Stability and Reactivity

### Reactivity

No dangerous reaction known under conditions of normal use.

### Chemical stability

Stable under recommended storage conditions. See Storage, Section 7. Hygroscopic.

### Possibility of hazardous reactions

Polymerization will not occur.

**Conditions to Avoid:** Exposure to elevated temperatures can cause product to decompose.

Generation of gas during decomposition can cause pressure in closed systems. Avoid direct sunlight or ultraviolet sources.

**Incompatible Materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

### Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers. Organic acids.

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

LD50, rat > 20,000 mg/kg

#### Dermal

LD50, rabbit > 2,000 mg/kg

#### Inhalation

No deaths occurred at this concentration. LC50, 2 h, Aerosol, rabbit 317.042 mg/l

### Eye damage/eye irritation

May cause slight temporary eye irritation. Corneal injury is unlikely. Mist may cause eye irritation.

### Skin corrosion/irritation

Prolonged contact is essentially nonirritating to skin. Repeated contact may cause flaking and softening of skin.

### Sensitization

#### Skin

Did not cause allergic skin reactions when tested in humans.

#### Respiratory

No relevant data found.

### Repeated Dose Toxicity

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

### Chronic Toxicity and Carcinogenicity

Did not cause cancer in laboratory animals.

### Developmental Toxicity

Did not cause birth defects or any other fetal effects in laboratory animals.

### Reproductive Toxicity

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility.

### Genetic Toxicology

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

## 12. Ecological Information

### Toxicity

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 > 100 mg/L in the most sensitive species tested).

### Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 h: 40,613 mg/l

### Aquatic Invertebrate Acute Toxicity

LC50, *Ceriodaphnia Dubia* (water flea), static test, 48 h: 18,340 mg/l

### Aquatic Plant Toxicity

ErC50, *Pseudokirchneriella subcapitata* (green algae), Growth rate inhibition, 96 h: 19,000 mg/l

### Toxicity to Micro-organisms

NOEC, no data available; *Pseudomonas putida*, 18 h: > 20,000 mg/l

### Aquatic Invertebrates Chronic Toxicity Value

*Ceriodaphnia Dubia* (water flea), semi-static test, 7 d, reproduction, NOEC: 13020 mg/l

### Persistence and Degradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

#### OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
81 %	28 d	OECD 301F Test	pass
96 %	64 d	OECD 306 Test	Not applicable

#### Indirect Photodegradation with OH Radicals

Rate Constant	Atmospheric Half-life	Method
1.28E-11 cm <sup>3</sup> /s	10 h	Estimated.

#### Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
69.000 %	70.000 %	86.000 %	

Chemical Oxygen Demand: 1.53 mg/mg

Theoretical Oxygen Demand: 1.68 mg/mg

### Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -1.07 EU Method A.8 (Partition Coefficient)

Bioconcentration Factor (BCF): 0.09; Estimated.

### Mobility in soil

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): < 1 Estimated.

Henry's Law Constant (H): 1.2E-08 atm\*m<sup>3</sup>/mole Measured

## 13. Disposal Considerations

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED

PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. As a service to its customers, Dow can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums. Telephone Dow's Customer Information Group at 1-800-258-2436 or 1-989-832-1556 (U.S.), or 1-800-331-6451 (Canada) for further details.

## 14. Transport Information

**TDG Small container**  
NOT REGULATED

**TDG Large container**  
NOT REGULATED

**IMDG**  
NOT REGULATED

**ICAO/IATA**  
NOT REGULATED

## 15. Regulatory Information

### CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

### European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

### Hazardous Products Act Information: CPR Compliance

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

### Hazardous Products Act Information: WHMIS Classification

This product is not a "Controlled Product" under WHMIS.

## 16. Other Information

### Product Literature

Additional information on this and other products may be obtained by visiting our web page.

### Hazard Rating System

NFPA	Health	Fire	Reactivity
	0	1	0

### Revision

Identification Number: 40806 / 1002 / Issue Date 2011.10.10 / Version: 5.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

### Legend

N/A	Not available
WW	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit

---

TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
VOL/VOL	Volume/Volume

*Dow Chemical Canada ULC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.*



*pm*  
*JAN 26 / 16*

**Material Safety Data Sheet for NWB-DA-105  
Denatured Ethyl Alcohol DA-20 (Hydrous)**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Id:** NWB-104 - DA20  
**Product Name:** Denatured Ethyl Alcohol - DA-20 (Hydrous)  
**Shipping Name:** Alcohols, N.O.S. (Ethanol)  
**Synonyms:** 20 Alcohol or Solvent DAG-20.  
**Chemical Family:** Alcohols/Phthalates/Esters/Alkaloids  
**Application:** As a solvent in the manufacture of bactericidal and other products.

**Produced By:**  
 Northwest Bioenergy Ltd.  
 1 Mile East Hwy 14, P.O Box 1090  
 Unity, SK, S0K 4L0  
 Phone: (306)228-4013

**Prepared by:** Alcohol QA/QC and Technical Services  
**Preparation date of MSDS:** March 17<sup>th</sup>, 2015  
**24-Hour Emergency Telephone Number (CANUTEC):** (613) 996-666

**2. COMPOSITION/INFORMATION ON INGREDIENTS AND TOXICOLOGICAL DATA**

Ingredients	Percentage(V/V)	LD50s and LC50s Route & Species:
Ethyl Alcohol 64-17-5	95.0	Inhalation LC50 (Rat) 31,623 ppm / 4hrs Oral LD50 (Rat) 7,060 mg/kg Dermal LD50 (Rabbit) 20,000 mg/kg
Diethylphthalate (DEP) 84-66-2	0.25	Inhalation LC50 (Rat) N/A Oral LD50 (Rat) 9,000 mg/kg Dermal LD50 (Rabbit) N/A
Camphor 76-22-2	40g/100L	Inhalation LC50 (Rat) N/A Oral LD50 (Rat) N/A Dermal LD50 (Rabbit) N/A
Denatonium Benzoate 3734-33-6	700mg/100L	Inhalation LC50 (Rat) N/A Oral LD50 (Rat) 612 mg/kg Dermal LD50 (Rabbit) N/A
Water 7732-18-5	Balance	Oral LD50 (Rat) >90 mL/kg

References: ACGIH (1988-1989), RTECS (1983)

### 3. HAZARDS IDENTIFICATION

**Potential Acute Health Effects:**

**Eye Contact:** Causes severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva.

**Skin Contact:** No adverse effects with normal skin. However, potentially harmful amounts of material may be absorbed across markedly abraded skin when contact is sustained, particularly in children.

**Inhalation:** High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches, dizziness, faintness, drowsiness, nausea, and vomiting.

**Ingestion:** May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination, and coma.

### 4. FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.

**Ingestion:** DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If conscious, have victim drink 250ml of water to dilute material in stomach.

**Notes to Physician:** Severe poisoning occurs when the blood ethanol level is 0.3-0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids. This product contains three ingredients of relatively low toxicity: Diethylphthalate, camphor, and denatonium benzoate.

### 5. FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** 14 °C **Flash Point Method:** Tag Closed Cup, ASTM D-56

**Other Important Data:**

Ingredients	Percentage(V/V)	Flammable Limits % v/v		Vapour Pressure Kpa@20°C	Vapour Density (Air=1)	Auto Ignition (Point °C)
		Lower	Upper			
Ethyl Alcohol	95.0	3.3	19	5.87	1.6	422
Diethylphthalate (DEP)	0.25	N/A	N/A	0.0001	7.7	N/A
Camphor	40g/100L	0.6	3.5	24	5.3	466
Denatonium Benzoate	700mg/100L	N/A	N/A	N/A	N/A	N/A
Water	Balance					

**Extinguishing Media:** Use DRY chemicals, CO2, or alcohol foam spray. Water is generally unsuitable and may help to spread the fire.

**Special Exposure Hazards:** Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapours; re-ignition is possible. Vapours from this product and may travel or be moved by air currents, and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Carbon monoxide. Carbon dioxide, and Formaldehyde.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent entry into sewers or streams, dike if needed. Consult local authorities.

**Procedure for Clean up:** Isolate hazard area and restrict access. Stop leak only if safe to do so. Remove ignition sources and work with non-sparking tools. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

## 7. HANDLING AND STORAGE

**Handling:** For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment.

**Storage:** Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Store in accordance with good industrial practices.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Use explosion proof equipment.

**Respiratory Protection:** Up to 1000 ppm, an approved organic vapour cartridge respirator can be used. For concentrations above 1000 ppm, an air-supplying respirator is recommended. The user should consult a respirator guide, such as the Canadian Standards Association's guide Z94.4- M1982.

**Gloves:** Neoprene gloves. Rubber gloves. Butyl rubber gloves.

**Skin Protection:** Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.



Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Ethanol	1000 ppm TLV-TWA	1000 ppm TWA	3300 ppm
Diethylphthalate	5mg/m <sup>3</sup> TLV		
Camphor	2mg/m <sup>3</sup> TLV		
Denatonium Benzoate	--		
Water	Not Available	Not Available	Not Available

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.  
**Colour:** Colourless  
**Odour:** Alcohol  
**pH:** Not Applicable.  
**Specific Gravity:** 0.810  
**Boiling Point at 760 mm Hg:** 78.4 °C  
**Distillation Rate :** 78.4 -81.9 °C  
**Freezing/Melting Point:** Not Available.  
**Vapour Pressure:** Not Available.  
**Vapour Density:** Not Available.  
**% Volatile by Volume:** 99.7%  
**Solubility:** Completely soluble.

#### 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable.  
**Hazardous Polymerization:** Will not occur.  
**Conditions to Avoid:** Avoid excessive heat, open flames and all ignition sources.  
**Materials to Avoid:** Oxidizing materials.  
**Hazardous Decomposition Products:** Carbon monoxide and/or Carbon dioxide and/or Formaldehyde.  
**Additional Information:** No additional remark.

#### 11. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.  
**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.

## 12. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (ETHANOL)

DOT Hazardous Class 3 (6.1)

DOT Packing Group: II

TDG (Canada):

TDG Proper Shipping Name: ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. (ETHANOL)

UN Number: UN1987

## 13. REGULATORY INFORMATION

**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Denatonium Benzoate is not a controlled product

**WHMIS Hazardous Class:**

B2 FLAMMABLE LIQUIDS

B4 FLAMMABLE SOLID (Camphor is a flammable solid, which has no effect on the classification of DA-20 95% v/v)

D2B TOXIC MATERIALS (Eye Irritant)

## 16. OTHER INFORMATION

**Additional Information:** This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contain all the information required by the CPR.

**Disclaimer: NOTICE TO READER:**

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\*\*\*\*END OF MSDS\*\*\*\*



# CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



## MATERIAL SAFETY DATA SHEET

*received on Nov 20/13 Conf*

MSDS NUMBER: MSDS-960

ISSUE DATE: 03/09/12

PAGE 1 OF 5

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT NAME

#### **SODIUM BICARBONATE**

**Manufacturer's Name and Address:** Church & Dwight Co., Inc.  
469 N. Harrison Street  
Princeton, NJ. 08543-5297  
USA

#### **24 HOUR EMERGENCY TELEPHONE:**

CHEMTREC 1-800-424-9300 (USA)

+001-703-527-3887(INT'L)

#### **Medical Emergency Phone:**

1-888-234-1828 (USA)

+001-952-853-1925(INT'L)

#### **Customer Information:**

1-800-524-1328 (USA)

+001-609-497-7220 (INT'L)

**Product Use:** Food ingredient, Pharmaceutical, Water Treatment,  
General Industrial Use

**Chemical Name:** Sodium bicarbonate

**Chemical Formula:** NaHCO<sub>3</sub>

**Synonyms/Common Names:** Baking Soda

### 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
White crystalline powder; no odor. Not a fire hazard. No significant health or environmental effects associated with this material.	
<u>HMIS Rating</u>	
Health	0
Fire	0
Reactivity	0

#### **Potential Health Effects**

**EYE:** Not an eye irritant.

**SKIN CONTACT:** Not a skin irritant.

# CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



## MATERIAL SAFETY DATA SHEET

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### 6. ACCIDENTAL RELEASE MEASURES

Scoop up into dry, clean containers. Wash away small uncontaminated amounts of residue with water.

### 7. HANDLING AND STORAGE

Store in cool, dry areas and away from incompatible substances (see Section 10).

Sodium Bicarbonate reacts with acids to yield carbon dioxide gas which can accumulate in confined spaces. Do not enter confined spaces until they have been well ventilated and carbon dioxide and oxygen levels have been determined to be safe.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS: None established.

RESPIRATORY PROTECTION: Dust mask required if total dust level exceeds 10 mg/m<sup>3</sup>.

PROTECTIVE GLOVES: General purpose for handling dry product. Impervious gloves when working with solutions.

EYE PROTECTION: Safety glasses when handling bulk material or when dusts are generated.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Full cover clothing. Apron where splashing may occur when working with solutions.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White crystalline powder.

ODOR: None.

PHYSICAL STATE: Solid

pH AS IS: Not Applicable

pH (1% SOLN. w/v): 8.2

VAPOR PRESSURE: Not applicable.

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

FREEZING/MELTING POINT: Not applicable.

SOLUBILITY IN WATER: 8.6 g/100 ml @ 20°C.

BULK DENSITY (g/cc): 62 lb/Ft<sup>3</sup>

% VOCs: Not applicable.

VOLATILE ORGANIC COMPOUNDS: Not applicable.

MOLECULAR WEIGHT: 84.02

### 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

# CHURCH & DWIGHT CO., INC.

CONSUMER PRODUCTS • SPECIALTY PRODUCTS



## MATERIAL SAFETY DATA SHEET

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FEDERAL WATER POLLUTION CONTROL ACT (40 CFR 401.15): Material contains no intentionally added or detectable (contaminant) levels of EPA priority toxic pollutants.

FOOD AND DRUG ADMINISTRATION: Generally Recognized As Safe (GRAS) direct food additive (21 CFR 184.1736).

US DEPARTMENT OF AGRICULTURE: List of Proprietary Substances - Permitted Use Codes 3A, J1, A1, G1, and L1.

CERCLA REPORTABLE QUANTITY: None

OSHA: Not hazardous under 29 CFR 1910.1200

RCRA: Not a hazardous material or a hazardous waste by listing or characteristic.

SARA TITLE III:

Section 302, Extremely Hazardous Substances: None

Section 311/312, Hazardous Categories: Non-hazardous

Section 313, Toxic Chemicals: None

Sodium Bicarbonate is reported in the EPA TSCA Inventory List.

Contains no VOCs.

NATIONAL STOCKING NUMBER: 6810002646618, Contract No. DLA 40086C1831

NSF STANDARD 60: Corrosion and Scale Control in Potable Water. Max use 200 mg/l.

CANADA-DSL

EUROPEAN INVENTORY (EINECS): 205-633-8

JAPANESE INVENTORY (MITI): 1-164

AUSTRALIAN INVENTORY (AICS): Carbonic acid, monosodium salt.

KOREA- yes

PHILLIPINE- yes

### 16. OTHER INFORMATION

SUPERSEDES DATE: 07/12/07

REASON FOR REVISION: New ANSI Revision.

For additional non-emergency health, safety and environmental information telephone 609.279.7705 or write to:

Church & Dwight Co. Inc.  
Product Stewardship  
469 North Harrison Street  
Princeton, New Jersey 08543

This Product Safety Data Sheet is offered solely for your information, consideration and investigation. Church & Dwight Co., Inc. provides no warranties; either expressed or implied, and assumes no responsibility for the accuracy or completeness of data contained herein. Church & Dwight Co., Inc. urges persons receiving this information to make their own determination as to the information suitability for their particular application.

## 1. PRODUCT IDENTIFICATION

Chemical Name: Sodium Chloride

Common Name: Salt

CAS Number: 7647-14-5

Chemical Formula: NaCl

### Product Names (Salt w/o additives):

All Purpose Purex Salt	H.G. Blending Salt	Rock Salt for Making Ice Cream
California Pure Fine Sea Salt	Industrial Crude Solar Salt	Safe-T-Salt (bagged only)
California Pure Medium Sea Salt	KD Crude Solar Salt	Select Extra Coarse Rock Salt
California Pure Coarse Sea Salt	Kleer Fine Salt	Service Pack Salt (all)
Canning & Pickling Salt	Kleer Granulated Salt	Ship n' Shore Rock Salt
Commercial Grade, Water Softening Pellets	Mill Run Salt	Solar Salt Pellets
Culinox 999 Chemical Grade Salt	Northern Fine +20 Rock Salt	Stock Salt
Culinox 999 Fine Salt	(Northern Rock) Feed Mixing Salt, F & R	USP Sodium Chloride
Culinox 999 Food Grade Salt	Purex Salt	Vacuum Evaporated Salt Pellets
Evaporated Granulated Salt	Purex Select Salt	Valu-Soft Solar Salt
Evaporated Salt Pellets	Reagent Grade Sodium Chloride	White Crystal Rock Salt (all)
Fine Mixing Salt	Refined Sea Salt	White Crystal Solar Salt (all)
Hay & Stock Salt, F&R	Rock Pretzel Salt	White Crystal Water
		Softening Solar Salt (all)

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

	Formula	CAS #	%
Sodium Chloride	NaCl	7647-14-5	100*

\*Including small quantities of naturally occurring moisture and calcium/magnesium salts

## 3. HEALTH HAZARD DATA

### Effects of Overexposure:

**Ingestion:** Very large doses can cause vomiting, diarrhea, and prostration. Oral toxicity rat LD<sub>50</sub>: 3000 mg / kg.

**Skin Contact:** Mild skin irritant.

**Eye Contact:** Moderate irritant.

**Inhalation:** Inhalation of dust may cause mild irritation to mucous membranes, nose and throat. Symptoms may include coughing, dryness and sore throat.

**Acute Systemic Effects:** Dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract.

**Chronic Systemic Effects:** No information found.

### **Hazard Rating**

(0=None, 4=Extreme)

① Health

② Flammability

③ Reactivity

## 4. EMERGENCY AND FIRST AID PROCEDURES

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if irritation persists.

**Skin Contact:** Wash exposed area with soap and water. Get medical advice if irritation develops.

**Inhalation:** Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:** If large amounts were swallowed, get medical advice.

## 5. FIRE AND EXPLOSION HAZARD DATA

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Product is non-combustible; no extinguishing media or special fire-fighting procedures are required. There are no unusual fire or explosion hazards.

## 6. REACTIVITY DATA

---

**Stability:**  Stable  Unstable

Stable and inert under normal conditions. No hazardous polymerization can occur. No hazardous decomposition products or conditions.

**Materials to Avoid:** Will react with strong acids (to generate hydrogen chloride) and strong oxidizing agents (to generate chlorine gas).

## 7. PHYSICAL DATA

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<b>Appearance:</b>	Colorless or white crystals	<b>pH:</b>	About 7
<b>Odor:</b>	None	<b>% Non-Volatile:</b>	100
<b>Density (Water = 1):</b>	2.165 g / cc	<b>Vapor Pressure (mm Hg):</b>	1 mm @ 865°C (1589°F)
<b>Solubility in Water:</b>	36 g / 100 cc water at 20°C (68°F)	<b>Boiling Point (760 mm Hg):</b>	1413°C (2575°F)

## 8. SPILL OR LEAK PROCEDURES

---

**Response to Small Spills:** Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

**Response to Large Spills:** Shovel and sweep up; containerize for reclamation or disposal.

**Hazards to be Avoided:** None.

**Reportable Quantity:** Check your state for requirements.

**Waste Classification:** Some states have set maximum limits on chlorides in waste effluent.

**Disposal Methods:** Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility or if local ordinances allow, can be dissolved in sufficient amounts of water to meet water quality standards, and flushed down a sewer drain. Ensure compliance with local, state and federal regulations.





## 9. SPECIAL PROTECTION INFORMATION

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- Respiratory Protection:** For conditions of use where exposure to the dust is apparent, a NIOSH approved dust/mist respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.
- For Hands, Body:** If deemed necessary, wear protective gloves and clean body-covering clothing.
- For Eyes:** If deemed necessary, use chemical safety glasses or goggles. Contact lenses should not be worn when working with this material. Eye wash fountain or water for eyewashing should be available.
- Ventilation:** In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

## 10. SPECIAL PRECAUTIONS

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Transport in dry equipment; store in dry location. Handling procedures should minimize generation of airborne dust. Dust respirator as appropriate where exposure exceeds the 10 mg/m<sup>2</sup> ACGIH TLV for nuisance dust.

## 11. LABELING INFORMATION

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<b>DOT Shipping Name:</b>	Salt (common), sodium chloride	<b>UN No.:</b>	Not applicable
<b>DOT Label:</b>	Not applicable	<b>Additional Product Label:</b>	Not applicable
		<b>Warning:</b>	None

## 12. USER'S RESPONSIBILITY

---

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.



## TWEEN™ 80-NV-LQ-(AP)

Version 1.

Revision Date 17.04.2012

Print Date 15.05.2012

*Nov 20/13 cly*

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

#### 1.1 Product identifier

Trade name : TWEEN™ 80-NV-LQ-(AP)  
Product code : SD47163  
Substance name : Polyoxyethylene(20) Sorbitan Monooleate  
Substance No. : 9005-65-6

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

Use of the Substance/Mixture : Surfactant

#### 1.3 Details of the supplier of the safety data sheet

Company : Croda Europe Limited  
Cowick Hall, Snaith,  
DN14 9AA Goole  
Telephone : +441405860551  
Telefax : +441405860205  
E-mail address : SDSCompiler@croda.com  
Responsible/issuing person

#### 1.4 Emergency telephone number

EUROPE: 00 32 3575 5555 . USA: Transportation  
Emergency Involving Chemical Spills, Leaks, Fires, or Accidents (24 hr.): (800) 424-9300  
. ASIA PACIFIC: 24 hr Toll Free Number: +800 ALERTSGS (+800-2537-8747) // 24 hr  
Singapore Exchange Number: +65 6542-9595

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

#### 2.3 Other hazards

May irritate skin.  
May irritate eyes.  
Ingestion may cause irritation to mucous membranes.  
May cause irritation of respiratory tract.

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### **3. Composition/information on ingredients**

#### **3.1 Substances**

Remarks : No dangerous ingredients according to Regulation (EC) No. 1907/2006

---

### **4. First aid measures**

#### **4.1 Description of first aid measures**

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

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

In case of skin contact : Wash off with soap and plenty of water.  
If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.  
If eye irritation persists, consult a specialist.

If swallowed : If symptoms persist, call a physician.

#### **4.2 Most important symptoms and effects, both acute and delayed**

Symptoms : None known.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

Treatment : None known.

---

### **5. Firefighting measures**

#### **5.1 Extinguishing media**

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : High volume water jet

#### **5.2 Special hazards arising from the substance or mixture**

Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.

#### **5.3 Advice for firefighters**

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

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### 6. Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

#### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.

#### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.  
Sweep up and shovel into suitable containers for disposal.

#### 6.4 Reference to other sections

None.

---

### 7. Handling and storage

#### 7.1 Precautions for safe handling

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice.

#### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container.  
Keep container tightly closed in a dry and well-ventilated place.

Advice on common storage : No special restrictions on storage with other products.

Other data : Stable under recommended storage conditions.

#### 7.3 Specific end uses

---

### 8. Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

##### Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

Hand protection : For prolonged or repeated contact use protective gloves.

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- Eye protection : Safety glasses with side-shields
- Skin and body protection : Impervious clothing
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
- Environmental exposure controls**
- General advice : Prevent product from entering drains.

### **9. Physical and chemical properties**

#### **9.1 Information on basic physical and chemical properties**

- Appearance : liquid
- Colour : yellow-orange
- Odour : no data available
- Flash point : > 148.9 °C
- Ignition temperature : Remarks: no data available
- Lower explosion limit : Note: no data available
- Upper explosion limit : Note: no data available
- Flammability (solid, gas) : no data available
- pH : 6.5 - 7.5
- Pour point : approximately -20.56 °C
- Boiling point : > 100 °C
- Vapour pressure : Note: no data available
- Density : Note: no data available
- Water solubility : Note: no data available
- Partition coefficient: n-octanol/water : Note: no data available
- Solubility in other solvents : Medium: ethanol  
Note: soluble
- Medium: Isopropanol  
Note: soluble
- Viscosity, dynamic : approximately 425 mPa.s
- Viscosity, kinematic : 300 - 500 mm<sup>2</sup>/s  
at 25 °C

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Evaporation rate : Note: no data available

### 9.2 Other information

Oxidising potential : Note: no data available

---

## 10. Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.  
Note: Stable under normal conditions.

### 10.4 Conditions to avoid

Conditions to avoid : None known.

### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)

Thermal decomposition : Note: no data available

---

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Acute oral toxicity : LD50: 42,200 mg/kg  
Species: rat  
Remarks: Low acute toxicity.

Acute inhalation toxicity :  
Remarks: no data available

Acute dermal toxicity : Remarks: no data available

#### Skin corrosion/Irritation

Skin irritation : Species: rabbit  
Result: No skin irritation  
Method: Draize Test  
Exposure time: 72 h

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Test substance:100%

### **Serious eye damage/eye irritation**

Eye irritation : Species: rabbit  
Result: No eye irritation  
Method: Draize Test  
Exposure time: 7 d  
Test substance: 100%

### **Respiratory or skin sensitization**

Sensitisation : Species: Humans  
Result: Did not cause sensitization on laboratory animals.  
Method: Patch Test on humans.  
Test substance: 100%

### **Target Organ Systemic Toxicant - Single exposure**

: Remarks: no data available

### **Target Organ Systemic Toxicant - Repeated exposure**

: Remarks: no data available

### **Aspiration hazard**

Aspiration toxicity : no data available

Further information : no data available

---

## **12. Ecological Information**

### **12.1 Toxicity**

Toxicity to fish : LC50: 471 mg/l  
Exposure time: 96 h  
  
Species: Oncorhynchus mykiss (rainbow trout)  
static test

Toxicity to daphnia and other aquatic invertebrates. : LC50: 165 mg/l  
Exposure time: 96 h  
Species: Mysidopsis bahia

Toxicity to bacteria : IC0: > 10,000 mg/l  
Species: Pseudomonas putida

### **12.2 Persistence and degradability**

Biodegradability : Remarks:  
no data available

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**12.3 Bioaccumulative potential**

Bioaccumulation : Remarks:  
no data available

**12.4 Mobility in soil**

Distribution among : Remarks:  
environmental compartments no data available

**12.5 Results of PBT and vPvB assessment**

no data available

**12.6 Other adverse effects**

Additional ecological : no data available  
information

---

**13. Disposal considerations**

**13.1 Waste treatment methods**

Product : Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.  
Empty containers should be taken to an approved waste  
handling site for recycling or disposal.

---

**14. Transport information**

Special precautions for :  
user

Not classified as dangerous in the meaning of transport regulations.

---

**15. Regulatory information**

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

**Notification status**

REACH : On the inventory, or in compliance with the inventory  
CH INV : The formulation contains substances listed on the Swiss  
Inventory  
DSL : All components of this product are on the Canadian DSL list.  
AICS : On the inventory, or in compliance with the inventory  
NZIoC : On the inventory, or in compliance with the inventory  
ENCS : On the inventory, or in compliance with the inventory  
ISHL : On the inventory, or in compliance with the inventory  
KECI : On the inventory, or in compliance with the inventory



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PICCS : On the inventory, or in compliance with the inventory  
IECSC : On the inventory, or in compliance with the inventory

**15.2 Chemical Safety Assessment**

This information is not available.

**16. Other information**

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

# SAFETY DATA SHEET

## WITCH HAZEL (14% STANDARD ALCOHOL)

*pm*  
FEB 01 2016

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

**NAME:** WITCH HAZEL (14% STANDARD ALCOHOL)  
**SDS NO.:** 1  
**EINECS NO.:** 283 6379  
**INCI NAME:** Hamamelis Virginiana (Witch Hazel) Water (and) Alcohol  
**SYNONYMS, TRADE NAMES:** Aqua Hamamelis, Hamamelis Water, Distilled Witch Hazel, Witch Hazel (14% Standard Alcohol)

**SUPPLIER:**  
 AMERICAN DISTILLING INC.  
 31 EAST HIGH STREET, EAST HAMPTON, CT 06424  
 Telephone 860-267-4444 Fax 860-267-1111 E-mail: americandistilling@whazel.com

**EMERGENCY TELEPHONES:**  
 CHEMTREC 1-800-424-9300

### 2 HAZARDS IDENTIFICATION:

**Product definition:** Mixture

**Classification 1999/45/EC:** Not regarded as a health hazard

**Classification (EC 1272/2008):** Flash point 43.10°C (closed cup).  
 Under the sustained combustibility test L2 the product does not support combustion.  
 Therefore the material is classified as 'Non-Hazardous for transportation'

**Label in accordance with (EC) No: 1272/2008:** Not applicable

Hazard Information Specific to Individual Components not Mixture.



### 3 COMPOSITION/INFORMATION ON INGREDIENTS:

**Substance/mixture:** Mixture

WITCH HAZEL DISTILLATE		86-85%
CAS No: 84696-19-5	EC No: 283-637-9	
CLASSIFICATION (EC 1272/2008) N/C		CLASSIFICATION (67/548) N/C
ETHANOL (ALCOHOL)		14-15%
CAS No: 64-17-5	EC No: 200-578-6	
CLASSIFICATION (EC 1272/2008) H225 H319 H335 H338		CLASSIFICATION (67/548) F; R11.

The Full Text for all R-Phases and Hazard Statements are Displayed in Section 16

## WITCH HAZEL (14% STANDARD ALCOHOL)

### 4 FIRST AID MEASURES:

- GENERAL ADVICE:** Remove affected person from source of contamination. Perform artificial respiration if breathing has stopped.
- Notes to the physician:** No specific first aid measures noted.
- INHALATION:** Move the exposed person to fresh air at once. Perform artificial respiration if breathing has stopped. Keep the affected person warm and at rest. Seek prompt medical attention.
- INGESTION:** NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! DO NOT INDUCE VOMITING! If necessary, rinse mouth and provide fresh air. Get medical attention if any discomfort continues.
- SKIN CONTACT:** If necessary remove contaminated clothing and wash skin with soap and water. Get medical attention if any discomfort continues.
- EYE CONTACT:** Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if any discomfort continues.
- SYMPTOMS:** No specific symptoms noted, but this chemical may still have adverse health impact, either in general or on certain individuals.
- EYE CONTACT:** May cause irritation and redness.
- SKIN CONTACT:** None known.
- INGESTION:** May cause nausea.
- INHALATION:** May cause mild irritation of the throat.

### 5 FIRE FIGHTING MEASURES:

**Extinguishing media:**

Fire can be extinguished using: water spray, fog or mist, dry chemicals, sand, dolomite etc.

**Special fire fighting procedures:**

Cool containers exposed to flames with water from the side until well after the fire is out. Move container from fire area if it can be done without risk.

**Unusual fire and explosion hazards:**

May explode when heated or when exposed to flames or sparks. May react violently with oxidizing materials.

**Special hazards:**

When heated and in case of fire, toxic vapors/gases may be formed.

**Protective measures in fire:**

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

### 6 ACCIDENTAL RELEASE MEASURES:

**SPILL CLEANUP METHODS:** Large Spillage: Contain spill and pump into a suitable container. For smaller quantities, drench with water making sure that washings, enter drain only when very dilute. Flush area with flooding amounts of water.

### 7 HANDLING AND STORAGE:

**USAGE PRECAUTIONS:** Keep away from heat, sparks and open flame. Avoid acids, moisture, and combustible materials.

**HYGIENIC WORK PRACTICES:**

Eating, smoking and water fountains prohibited in immediate work area.

Always observe good personal hygiene practices, especially when working with chemicals.

**STORAGE PRECAUTIONS:** Keep in cool, dry, ventilated storage and closed containers. Store isolated from oxidizing materials. Store away from all sources of ignition. Store in containers made of stainless steel, polyethylene or glass.

Do not store in contact with aluminium, zinc, copper, iron, or their alloys. Product will discolor if it comes in contact with iron.

**STORAGE CRITERIA:** Chemical storage.

## WITCH HAZEL (14% STANDARD ALCOHOL)

### 8 EXPOSURE CONTROLS/PERSONAL PROTECTION:

INGREDIENT NAME	CAS No,	STD LT EXP (8hrs)	ST EXP (15 min)
HAMAMELIS VIRGINIANA WATER	84696-19-5	No std.	No std
ALCOHOL (ETHANOL)	64-17-5	OES 1000 PPM	No std.

#### PROTECTIVE EQUIPMENT:



Keep exposure as low as is reasonably practicable.

**ENGINEERING MEASURES:** Provide adequate ventilation.

**RESPIRATORY EQUIPMENT:** None required.

**HAND PROTECTION:** Use suitable protective gloves.

**EYE PROTECTION:** Wear approved safety goggles.

**OTHER PROTECTION:** Provide eyewash, quick drench

**HYGIENE MEASURES:** No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

### 9 PHYSICAL AND CHEMICAL PROPERTIES:

<b>COLOR:</b>	colorless
<b>APPEARANCE:</b>	liquid, clear
<b>ODOR/TASTE:</b>	characteristic
<b>SOLUBILITY DESCRIPTION:</b>	very soluble in water
<b>SOLUBILITY VALUE (G/100g H<sub>2</sub>O@20°C)</b>	N/D
<b>SPECIFIC GRAVITY (WATER=1):</b>	0.976 - 0.982 @ 20°C (BPC)
	0.979 - 0.983 @ 25°C (USP)
<b>MOL WEIGHT (AT WT):</b>	N/A
<b>PARTICLE SIZE(MICR):</b>	N/A
<b>BULK DENSITY:</b>	N/A
<b>REFRACTIVE INDEX:</b>	N/D
<b>VAPOR PRESSURE (mmHg):</b>	18.75 @ 20°C
<b>VAPOR DENSITY (AIR=1):</b>	>1
<b>VISCOSITY:</b>	N/D
<b>VOLATILE BY VOL. (%):</b>	N/D
<b>FREEZING POINT:</b>	-8°C
<b>BOILING POINT:</b>	88°C 760mmHg
<b>CRITICAL TEMP.:</b>	N/D
<b>DECOMPOSITION TEMP.:</b>	N/D
<b>pH VALUE:</b>	3.0 - 5.0
<b>FLASH POINT:</b>	43.10°C

Under the sustained combustibility test L2 the product does not support combustion.

Therefore the material is classified as 'Non-Hazardous for transportation'

<b>FLASH POINT METHOD:(CLOSED CUP)</b>	Seta Flash Closed Cup flashpoint analysis ASTM D-32-78-96, (Reapproved 2004) Method B
<b>FLAMMABILITY LIMIT: LOWER %:</b>	N/D
<b>OXIDIZING PROPERTIES:</b>	Not oxidizing
<b>PARTITION COEFFICIENT: Octanol/water:</b>	N/D

### 10 STABILITY AND REACTIVITY:

**STABILITY:** Normally stable.

**INCOMPATIBLE SPECIFIC CHEMICALS:** Aluminium, Zinc, Copper, Aluminium, Iron, Zinc and Copper alloys

**MATERIALS TO AVOID:** Strong oxidizing agents. Flammable/comb. material

**CONDITIONS TO AVOID:** Avoid heat, flames and other sources of ignition.

## WITCH HAZEL (14% STANDARD ALCOHOL)

### 11 TOXICOLOGICAL INFORMATION:

**TOXIC DOSE1 LD50:** N/D

**HEALTH WARNINGS:** No specific health warnings noted.

**SYMPTOMS:** No specific symptoms noted, but this material may still have adverse health impact, either in general or on certain individuals.

**EYE CONTACT:** May cause irritation and redness.

**SKIN CONTACT:** None known.

**INGESTION:** May cause nausea.

**INHALATION:** May cause mild irritation of the throat.

**ACUTE AND CHRONIC HEALTH HAZARDS:** No known chronic or acute health risks.

**CARCINOGENICITY:** Data not available.

### 12 ECOLOGICAL INFORMATION:

Readily biodegradable.

### 13 DISPOSAL CONSIDERATIONS:

**DISPOSAL METHODS:** Dispose of as nonhazardous, solid waste in accordance with the Solid Waste Disposal Act of 1965 and the Resource Conservation and Recovery Act (RCRA) of 1976, as amended.

### 14 TRANSPORT INFORMATION:

**DOT:** Not regulated

Special provision 49 CFR 173.150 (e) – Aqueous solution containing greater than 50% water and less than 24% alcohol and no other hazardous material.

**ADR/RID:** Not regulated

Aqueous solutions of ethyl alcohol and alcoholic beverages containing not more than 24% alcohol by volume are not subject to the provisions of the ADR.

**IATA:** Not regulated

Special provision A58. Ethanol aqueous solutions containing 24% or less alcohol by volume.

**IMDG:** Not regulated

Special provision 144. Aqueous solutions containing 24% or less ethanol by volume.

### 15 REGULATORY INFORMATION:

**LABEL FOR SUPPLY:** No hazard label required according to 40 CFR Part 261 Identification and Listing of Hazardous Waste.

#### EU DIRECTIVES:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemical Agency, amending Directive 1999/45/EC and repealing Council regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directive 91/155/EEC, 93/67/EEC, 93/105/EEC and 2000/21/EEC, including amendments.

#### STATUTORY INSTRUCTIONS

The chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I.2009 No. 716)

Under the sustained combustibility test L2 the product does not support combustion.

Therefore the material is classified as 'Non-Hazardous for transportation'

#### APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply.

## WITCH HAZEL (14% STANDARD ALCOHOL)

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### 16 OTHER INFORMATION:

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Cosmetics Directive 7<sup>th</sup> Amendment: Not restricted

**APPLICATIONS:** Medicine. Toiletries

**General Information:**

**Shelf Life:** 36 months when stored within advised conditions

**GMO/BSE/TSE** Free

**Animal Testing:** There has never been any animal testing carried out on this product

F Flammable  
R11 Highly Flammable  
H225 Highly Flammable Liquid and Vapor  
H319 Causes Serious Eye Irritation  
H335 May Cause Respiratory Irritation  
H336 May Cause Drowsiness or Dizziness

**INFORMATION SOURCES:**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS) – Second Edition (2012)  
Registry of Toxic Effects of Chemical Substances (RTECS).  
The Merck Index, 11th. edition, 1989.  
EH40/94 Occupational Exposure Limits 1994  
Material Safety Data Sheets, Miscellaneous Manufacturers

**ISSUE NO: 1**

**DATED: 09/15/2014 (MM/DD/YYYY)**

N/A = Not Applicable, N/D = No Data Available, N/C = Not Classified, N/K = Not Known

**DISCLAIMER**

THIS 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. SUCH INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.



MATERIAL SAFETY DATA SHEET

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CODE # 8800

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*AUG 14/14*

SECTION I PRODUCT INFORMATION

PRODUCT IDENTIFIER : ZINC OXIDE USP  
CHEMICAL NAME AND SYNONYMS : White zinc, permanent white, Chinese white, zinc monoxide  
IDENTIFICATION NUMBER : Not regulated  
PRODUCT USE : Industrial use

SUPPLIER : B.G.R. Chemical Products Inc.  
ADDRESS : 600 Delmar Avenue  
Pointe-Claire, QC  
H9R 4A8  
TELEPHONE : (514) 694-7442

EMERGENCY: Newalta Industrial Services Inc.  
24H NUMBER: 1-800-567-7455

SECTION II HAZARDOUS INGREDIENTS

INGREDIENT	CONC.	CAS NUMBER	LD50(rat-oral)	LC50(rat-ihl)
ZINC OXIDE	100%	1314-13-2	7950 mg/kg (mouse)	2500 mg/m <sup>3</sup> /4h (mouse)

SECTION III WHMIS CLASSIFICATION

NOT CONTROLLED

SECTION IV PHYSICAL DATA

PHYSICAL STATE	Solid	pH (water=7)	6.9 - 7.4
ODOUR AND APPEARANCE	white odourless powder	SPECIFIC GRAVITY (water=1)	5.6
ODOUR THRESHOLD	Not applicable	VAPOUR DENSITY	Not applicable
BOILING POINT	Sublimes	VAPOUR PRESSURE	Not applicable
MELTING POINT	1975°C	EVAPORATION RATE	Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION	Not applicable		

SECTION V FIRE OR EXPLOSION

CONDITION OF FLAMMABILITY: Not flammable.

MEANS OF EXTINCTION: Use extinguish media appropriate for surrounding materials.

FLASH POINT	Not available	AUTO-IGNITION TEMPERATURE	Not available
UPPER FLAMMABLE LIMIT	Not available	MECHANICAL IMPACT SENSITIVITY	Not available
LOWER FLAMMABLE LIMIT	Not available	STATIC DISCHARGE SENSITIVITY	Not available

HAZARDOUS COMBUSTION PRODUCTS: At very high temperatures can emit toxic zinc fumes.

SECTION VI REACTIVITY DATA

CHEMICAL INSTABILITY CONDITIONS: Stable under normal storage conditions.

INCOMPATIBLE SUBSTANCES AND CONDITIONS OF REACTIVITY: Can react violently when mixed with chlorinated rubber, magnesium, linseed oil, strong bases, and strong acids.



**HAZARDOUS DECOMPOSITION PRODUCTS:** At very high temperatures can emit toxic zinc fumes.

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**SECTION VII TOXICOLOGICAL PROPERTIES**

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**SKIN CONTACT/ABSORPTION:** May cause irritation.

**EYE CONTACT:** May cause irritation and redness.

**INHALATION:** Causes severe respiratory tract irritation. Inhalation of the mucous membranes. Inhalation of freshly formed zinc oxide fumes may cause a flu like illness called metal fume fever. Symptoms occurs 4 to 12 hours after exposure. Severe over exposure may result in bronchitis or pneumonia with a blueish tint to the skin.

**INGESTION:** Ingestion of large amounts can cause vomiting and gastro-enteritis. The toxic dose is 2 g/kg and over

**ACUTE/CHRONIC EXPOSURE EFFECTS:** Repeated or prolonged exposure to zinc oxide fumes may cause conjunctivitis.

<b>EXPOSURE LIMIT</b>	10 mg/m <sup>3</sup> (dusts)	<b>SHORT TERM EXPOSURE LIMIT</b>	Not available
<b>CARCINOGENICITY</b>	Not available	<b>SENSITIZATION TO PRODUCT</b>	Not available
<b>TERATOGENICITY</b>	Not available	<b>MUTAGENICITY</b>	Not available
<b>SYNERGISTIC PRODUCTS</b>	Not available	<b>REPRODUCTIVE TOXICITY</b>	Not available
<b>IRRITANCY OF PRODUCT</b>	No		

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**SECTION VIII PREVENTIVE MEASURES**

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**PROTECTIVE GLOVES:** Recommended.

**EYE PROTECTION:** Wear chemical safety goggles. Do not wear contact lenses.

**RESPIRATORY PROTECTION:** Use a NIOSH approved respirator if there is a risk of over exposure.

**OTHER PROTECTIVE EQUIPMENT:** Use appropriate protective clothing to avoid skin contact. Provide eye bath and security shower facilities nearby.

**ENGINEERING CONTROLS:** Use local exhaust ventilation.

**PROCEDURES TO BE FOLLOWED IN CASE OF SPILL OR LEAK:** Use appropriate respiratory protection. Avoid dust dispersal. Sweep up and place in a waste container.

**WASTE DISPOSAL:** Dispose of waste in accordance to Federal, provincial and municipal regulations.

**HANDLING AND STORAGE PROCEDURES:** Store tightly closed containers in a cool, dry and well-ventilated area. Avoid dust dispersal.

**SPECIAL SHIPPING INFORMATION:**

Shipping Name: Zinc oxide  
Class/Division: Not regulated

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**SECTION IX FIRST AID MEASURES**

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**SKIN:** Wash affected skin with soap and water. Get medical advice if irritation develops.

**EYES:** Wash thoroughly with running water for at least 15 minutes. Get medical advice if irritation develops.

**INHALATION:** Remove victim to fresh air. Get medical attention for any breathing difficulty.

**INGESTION:** Give several glasses of water to dilute material. If large amounts have been swallowed, get prompt medical attention. Never give anything by mouth to an unconscious or convulsing person.





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**SECTION X PREPARATION INFORMATION**

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DATE : March 3<sup>RD</sup>, 2014

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IMPORTANT: The information presented herein is believed to be accurate and is offered only as a guide. Users should make their own tests to determine the suitability of these products for their own particular purposes. Users assume all risk of use, storage and handling of the product. No warranty, express or implied, is made including, but not limited to, implied warranties of merchantability and fitness for a particular purpose. Nothing contained herein shall be construed as a license to operate under, or recommendation to infringe any patents.