SAFETY DATA SHEET

1. Identification

Product identifier: Freeze-Off® Super Penetrant

Other means of identification

Product code: 75222 (Item #1006366)

Recommended use: Penetrant

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name: CRC Canada Co.
Address: 2-1246 Lorimar Dr.
Mississauga, Ontario L5S 1R2
Canada
Telephone: 905-670-2291
Website: www.crc-canada.ca
E-mail: Support.CA@crcindustries.com
Emergency phone number: 24-Hour Emergency 800-424-9300 (Canada)
(CHEMTREC) 703-527-3887 (International)

2. Hazard(s) identification

Physical hazards

- Flammable aerosols Category 1
- Gases under pressure Liquefied gas
- Physical hazards not otherwise classified Category 1

Health hazards

- Skin corrosion/irritation Category 2
- Serious eye damage/eye irritation Category 2A
- Sensitization, skin Category 1A
- Aspiration hazard Category 1

Environmental hazards

- Hazardous to the aquatic environment, acute hazard Category 2
- Hazardous to the aquatic environment, long-term hazard Category 2

Label elements

Signal word: Danger

Hazard statement:
Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention:
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves. Avoid release to the environment.
Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. In case of leakage, eliminate all ignition sources. Collect spillage.

Storage

Store locked up. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

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

Other hazards

None known.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>CAS number</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>75-37-6</td>
<td>1,1-difluoroethane</td>
<td>HFC-152a</td>
<td>30 - 60</td>
</tr>
<tr>
<td>64742-46-7</td>
<td>distillates (petroleum), hydrotreated middle</td>
<td></td>
<td>15 - 40</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>distillates (petroleum), hydrotreated light</td>
<td></td>
<td>5 - 10</td>
</tr>
<tr>
<td>8006-64-2</td>
<td>turpentine, oil</td>
<td></td>
<td>3 - 7</td>
</tr>
<tr>
<td>111-76-2</td>
<td>2-butoxyethanol</td>
<td></td>
<td>1 - 5</td>
</tr>
<tr>
<td>123-42-2</td>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol)</td>
<td></td>
<td>1 - 5</td>
</tr>
<tr>
<td>64742-48-9</td>
<td>naphtha (petroleum), hydrotreated heavy</td>
<td></td>
<td>1 - 5</td>
</tr>
<tr>
<td>8002-09-3</td>
<td>pine oil</td>
<td></td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

The exact percentage (concentration) of composition has been withheld as a trade secret. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. Headache. Dizziness. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Material name: Freeze-Off® Super Penetrant

75222 (Item #1006366) Version #: 01 Issue date: 06-20-2017
Specific hazards arising from the chemical

Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.

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.

Fire fighting equipment/instructions

In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire and/or explosion do not breathe fumes.

General fire hazards

Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Remove all possible sources of ignition in the surrounding area. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
8. Exposure controls/personal protection

Occupational exposure limits

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>turpentine, oil (CAS 8006-64-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
</tbody>
</table>

**Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>97 mg/m³</td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>238 mg/m³</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated light (CAS 64742-47-8)</td>
<td>TWA</td>
<td>200 mg/m³</td>
<td>Vapor.</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1590 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

<table>
<thead>
<tr>
<th>Components</th>
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<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated light (CAS 64742-47-8)</td>
<td>TWA</td>
<td>200 mg/m³</td>
<td>Non-aerosol.</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>turpentine, oil (CAS 8006-64-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
</tbody>
</table>

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

<table>
<thead>
<tr>
<th>Components</th>
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<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>turpentine, oil (CAS 8006-64-2)</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
</tbody>
</table>
Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>50 ppm</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)</td>
<td>TWA</td>
<td>525 mg/m³</td>
</tr>
<tr>
<td>turpentine, oil (CAS 8006-64-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>97 mg/m³</td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td>TWA</td>
<td>238 mg/m³</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated light (CAS 64742-47-8)</td>
<td>TWA</td>
<td>1590 mg/m³</td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td>turpentine, oil (CAS 8006-64-2)</td>
<td>TWA</td>
<td>112 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butyoxacetic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

Exposure guidelines

**Canada - Alberta OELs: Skin designation**

- distillates (petroleum), hydrotreated light (CAS 64742-47-8)
  - Can be absorbed through the skin.

**Canada - British Columbia OELs: Skin designation**

- distillates (petroleum), hydrotreated light (CAS 64742-47-8)
  - Can be absorbed through the skin.

**Canada - Saskatchewan OELs: Skin designation**

- distillates (petroleum), hydrotreated light (CAS 64742-47-8)
  - Can be absorbed through the skin.

**Appropriate engineering controls**

- Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

- Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection**

- Wear protective gloves such as: Nitrile. Rubber.
Wear appropriate chemical resistant clothing.

Other
Respiratory protection
If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
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.

9. Physical and chemical properties

Appearance
- Physical state: Liquid.
- Form: Aerosol.
- Color: Orange.

Odor
- Odor: Pine.
- Odor threshold: Not available.

pH
- Not available.

Melting point/freezing point
- -103 °F (-75 °C) estimated

Initial boiling point and boiling range
- 311 °F (155 °C) estimated

Flash point
- 126 °F (52.2 °C) Tag Closed Cup

Evaporation rate
- Slow.

Flammability (solid, gas)
- Not available.

Upper/lower flammability or explosive limits
- Flammability limit - lower (%): 0.6 % estimated
- Flammability limit - upper (%): 10.6 % estimated

Vapor pressure
- 5180.4 hPa estimated

Vapor density
- > 1 (air = 1)

Relative density
- 0.88 estimated

Solubility(ies)
- Solubility (water): Not available.

Partition coefficient (n-octanol/water)
- Not available.

Auto-ignition temperature
- 428 °F (220 °C) estimated

Decomposition temperature
- Not available.

Viscosity
- Not available.

Other information
- Percent volatile: 100 % estimated

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
Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents. Chlorine.

Hazardous decomposition products
11. Toxicological information

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Prolonged inhalation may be harmful.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Causes skin irritation. May cause an allergic skin reaction.</td>
</tr>
<tr>
<td>2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.</td>
<td></td>
</tr>
<tr>
<td>Eye contact</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Aspiration may cause pulmonary edema and pneumonitis. Headache. Dizziness. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.</td>
</tr>
</tbody>
</table>

Information on toxicological effects

### Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
  **Acute** |  
  Dermal | Rabbit | > 2000 mg/kg |
  Oral | Rabbit | 1300 mg/kg |
| 4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2) |  
  **Acute** |  
  Dermal | Rabbit | 13500 mg/kg |
  Oral | Rat | 4 g/kg |
| Distillates (petroleum), hydrotreated light (CAS 64742-47-8) |  
  **Acute** |  
  Dermal | Rabbit | > 2000 mg/kg |
| Distillates (petroleum), hydrotreated middle (CAS 64742-46-7) |  
  **Acute** |  
  Dermal | Rat | > 2000 mg/kg |
  Oral | Rat | > 5000 mg/kg |
| Naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9) |  
  **Acute** |  
  Dermal | Rabbit | > 2000 mg/kg |
  Inhalation | Rat | 61 mg/l, 4 Hours |
  Oral | Rat | > 5000 mg/kg |
| Turpentine, oil (CAS 8006-64-2) |  
  **Acute** |  
  Inhalation | Rat | 3590 mg/l, 1 Hours |
Components | Species | Test Results
--- | --- | ---
Oral | Rat | 5760 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**
- Causes serious eye irritation.

**Respiratory or skin sensitization**

- ACGIH sensitization: TURPENTINE AND SELECTED MONOTERPENES (CAS 8006-64-2)
  - Dermal sensitization

- **Canada - Alberta OELs: Irritant**
  - 2-butoxyethanol (CAS 111-76-2)
  - 4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)

- **Canada - British Columbia OELs: Respiratory or skin sensitiser**
  - turpentine, oil (CAS 8006-64-2)
  - Capable of causing respiratory, dermal or conjunctival sensitization.

- **Canada - Manitoba OELs Hazard: Dermal sensitization**
  - turpentine, oil (CAS 8006-64-2)
  - Dermal sensitization

- **Canada - Quebec OELs: Sensitizer**
  - turpentine, oil (CAS 8006-64-2)
  - Sensitizer.

- **Canada - Saskatchewan OELs Hazard Data: Sensitiser**
  - turpentine, oil (CAS 8006-64-2)
  - Sensitizer.

**Respiratory sensitization**
- Not a respiratory sensitizer.

**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**

- **ACGIH Carcinogens**
  - 2-butoxyethanol (CAS 111-76-2)
  - A3 Confirmed animal carcinogen with unknown relevance to humans.

- distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
  - A4 Not classifiable as a human carcinogen.

- turpentine, oil (CAS 8006-64-2)
  - A4 Not classifiable as a human carcinogen.

- **Canada - Manitoba OELs: carcinogenicity**
  - 2-butoxyethanol (CAS 111-76-2)
  - Confirmed animal carcinogen with unknown relevance to humans.

- distillates (petroleum), hydrotreated middle (CAS 64742-46-7)
  - Not classifiable as a human carcinogen.

- turpentine, oil (CAS 8006-64-2)
  - Not classifiable as a human carcinogen.

- **IARC Monographs. Overall Evaluation of Carcinogenicity**
  - 2-butoxyethanol (CAS 111-76-2)
  - 3 Not classifiable as to carcinogenicity to humans.

**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.

**Chronic effects**
- Prolonged inhalation may be harmful.

### 12. Ecological information

**Ecotoxicity**
- Toxic to aquatic life with long lasting effects.
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
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</tr>
</thead>
<tbody>
<tr>
<td>2-butoxyethanol (CAS 111-76-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout, donaldson trout</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol) (CAS 123-42-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Bluegill (Lepomis macrochirus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Goldfish (Carassius auratus)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated light (CAS 64742-47-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated middle (CAS 64742-46-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout, donaldson trout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Onchorhynchus mykiss)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>naphtha (petroleum), hydrotreated heavy (CAS 64742-48-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia pulex)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Rainbow trout, donaldson trout</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Onchorhynchus mykiss)</td>
</tr>
</tbody>
</table>

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

**Persistence and degradability**

**Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Partition coefficient n-octanol / water (log Kow)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,1-difluoroethane</td>
<td>0.75</td>
</tr>
<tr>
<td>2-butoxyethanol</td>
<td>0.81, log Pow</td>
</tr>
<tr>
<td>4-hydroxy-4-methylpentan-2-one (diacetone alcohol)</td>
<td>-0.098</td>
</tr>
<tr>
<td>distillates (petroleum), hydrotreated light</td>
<td>&gt; 4</td>
</tr>
</tbody>
</table>

**Mobility in soil**

No data available.

**Other adverse effects**

The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

**Disposal of waste from residues / unused products**

Contents under pressure. Do not puncture, incinerate or crush. Empty container can be recycled. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.

**Local disposal regulations**

Dispose in accordance with all applicable regulations.

**Hazardous waste code**

Not regulated.

**Contaminated packaging**

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

14. Transport information

**TDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN proper shipping name</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1950</td>
<td>AEROSOLS, flammable, Limited Quantity</td>
</tr>
</tbody>
</table>
2.1
Transport hazard class(es)

Class 2.1
Subsidiary risk -

Packing group Not applicable.
Environmental hazards No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Special provisions 80

IATA
UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity

Transport hazard class(es)

Class 2.1
Subsidiary risk -

Packing group Not applicable.
Environmental hazards No.

ERG Code 10L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.

IMDG
UN number UN1950
UN proper shipping name AEROSOLS, Limited Quantity

Transport hazard class(es)

Class 2
Subsidiary risk -

Packing group Not applicable.
Environmental hazards No.

Marine pollutant Not applicable.

EmS Not available.

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 established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.


1,1-difluoroethane (CAS 75-37-6) Controlled Drugs and Substances Act
Not regulated.

Export Control List (CEPA 1999, Schedule 3) Not listed.

Greenhouse Gases

1,1-difluoroethane (CAS 75-37-6)

Precursor Control Regulations
Not regulated.

International regulations

Stockholm Convention Not applicable.

Rotterdam Convention Not applicable.

Kyoto protocol
1,1-difluoroethane (CAS 75-37-6) Listed.
Montreal Protocol
Not applicable.

Basel Convention
Not applicable.

International Inventories

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

*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

Issue date          06-20-2017
Version #           01
Further information CRC # 447C

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