1. Product and Company Identification

Product number: 018-002  
Product name: Disinfectant Spray for Health Care Use  
Effective date: 30-Mar-2012  
Company information: Claire Manufacturing Co.  
1005 S. Westgate Drive  
Addison, IL 60101 United States  
Company phone: General Assistance 1-630-543-7600  
Emergency telephone US: 1-866-836-8855  
Emergency telephone outside US: 1-952-852-4646  
Version #: 09  
Supersedes date: 04-Aug-2009  
Product use: Disinfectant

2. Hazards Identification

Emergency overview: Aerosol. FLAMMABLE CONTENTS UNDER PRESSURE. Will be easily ignited by heat, spark or flames. Prolonged exposure may cause chronic effects. Contact with eyes may cause irritation.

Potential health effects:
- **Routes of exposure**
  - Skin contact. Eye contact. Ingestion.
- **Eyes**
  - Moderately irritating to the eyes.
- **Skin**
  - Harmful if absorbed through the skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
- **Inhalation**
  - Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Prolonged inhalation may be harmful.
- **Ingestion**
  - Exposure by ingestion of an aerosol is unlikely. May cause delayed lung damage. Components of the product may be absorbed into the body by ingestion.

Target organs: Central nervous system. Lungs.

Chronic effects: Unconsciousness. Conjunctiva. Cyanosis (blue tissue condition, nails, lips, and/or skin). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage. May cause delayed lung injury.

Signs and symptoms:

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>40 - 50</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>15 - 20</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>5 - 8</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>1 - 3</td>
</tr>
<tr>
<td>Non-hazardous and other components below reportable levels</td>
<td>20 - 40</td>
<td></td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures:
- **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. Call a physician or Poison Control Center immediately.
- **Skin contact**
  - Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
**5. Fire Fighting Measures**

**Flammable properties**
Vapor or gas may spread to distant ignition sources and flash back. Runoff to sewer may cause fire or explosion hazard.

**Extinguishing media**

| Suitable extinguishing media | Foam. Dry chemical. Carbon dioxide (CO2). |

**Protection of firefighters**

| Protective equipment and precautions for firefighters | In case of fire and/or explosion do not breathe fumes. Containers should be cooled with water to prevent vapor pressure build up. |

**6. Accidental Release Measures**

**Methods for containment**
Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Stop the flow of material, if this is without risk.

**Methods for 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.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

**7. Handling and Storage**

**Handling**
Pressurized container: Do not pierce or burn, even after use. Do not smoke while using or until sprayed surface is thoroughly dry. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not get this material in contact with eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid prolonged exposure.

**Storage**
Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Keep away from heat, sparks, and flame. Avoid exposure to long periods of sunlight. Store in cool place. Keep in an area equipped with sprinklers. Keep out of the reach of children. Level 2 Aerosol.

**8. Exposure Controls / Personal Protection**

**Exposure limits**

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>Components</th>
<th>CAS #</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>1000 ppm</td>
<td>1000 ppm</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>n-Butane</td>
<td>106-97-8</td>
<td>1000 ppm</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>Propane</td>
<td>74-98-6</td>
<td>1000 ppm</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>Methanol</td>
<td>67-56-1</td>
<td>200 ppm</td>
<td>250 ppm</td>
<td>Not established</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OSHA</th>
<th>Components</th>
<th>CAS #</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>1000 ppm</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>Propane</td>
<td>74-98-6</td>
<td>1000 ppm</td>
<td>Not established</td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>Methanol</td>
<td>67-56-1</td>
<td>200 ppm</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

| Eye / face protection | Do not get in eyes. Chemical goggles are recommended. |
| Skin protection       | Chemical resistant gloves. |
| Respiratory protection| When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. |

**Appearance**
Compressed liquefied gas.
Boiling point 141.8 °F (61.1 °C) estimated
Color Clear.
Density 0.7517 g/cm³ estimated
Flammability (HOC) 24.9174 kJ/g estimated
Flash back No
Flash point -156 °F (-104.4 °C) Propellant
Form Aerosol.
Freezing point Not available
Odor Alcoholic.
pH 9 - 10
Physical state Liquid.
Pressure 75 - 90 psig @ 70°F
Solubility Partially
Specific gravity 0.7518

10. Chemical Stability & Reactivity Information

Chemical stability Stable at normal conditions. Risk of ignition.
Conditions to avoid Heat, flames and sparks.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological Information

Acute effects Acute LC50: 82 mg/l/4h estimated, Rat, Inhalation
Component analysis - LD50

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50/Rat, LD/L</th>
<th>LC50/Rat, LC/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td></td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td></td>
</tr>
<tr>
<td>Oral LD50 Rat 7060 mg/kg; Inhalation LC50 Rat 124.7 mg/L 4 h; Inhalation LC50 Rat 64000 ppm 4 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rat 5628 mg/kg; Dermal LD50 Rabbit 15800 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation LC50 Rat 83.2 mg/L 4 h; Inhalation LC50 Rat 64000 ppm 4 h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhalation LC50 Rat 658 mg/L 4 h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Sensitization Not expected to be hazardous by OSHA criteria.
Carcinogenicity

IARC - Group 1 (Carcinogenic to Humans)
Ethyl Alcohol 64-17-5 Monograph 100E [in preparation] (in alcoholic beverages); Monograph 96 [2010] (in alcoholic beverages)

Teratogenicity Animal experiments showed mutagenic and teratogenic effects.

12. Ecological Information

Ecotoxicity LC50 1766 mg/L estimated, Fish, 96.00 Hours,
EC50 947 mg/L estimated, Daphnia, 48.00 Hours,
Contains a substance which causes risk of hazardous effects to the environment.

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F
Disposal instructions Contents under pressure. Dispose of this material and its container to hazardous or special waste collection point. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.
14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:
- Proper shipping name: Aerosols
- Hazard class: 2.1
- UN number: UN1950

Additional information:
- Special provisions: 153, N82
- Packaging exceptions: LTD QTY
- Packaging non bulk: None
- Packaging bulk: None

Further information: Until 12/31/2013, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/13 and may be used now in place of the "Consumer Commodity ORM-D" marking but not concurrently.

IMDG

Basic shipping requirements:
- Proper shipping name: AEROSOLS
- Hazard class: 2.1
- UN number: 1950

Additional information:
- Item: 5F
- Labels required: None
- Transport Category: 2

IATA

Basic shipping requirements:
- Proper shipping name: Aerosols, flammable
- Hazard class: 2.1
- UN number: 1950

Additional information:
- Item: 5F
- Labels required: None

15. Regulatory Information

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

U.S. - CERCLA/SARA - Section 313 - Emission Reporting
Methanol 67-56-1 1.0 % de minimis concentration

Occupational Safety and Health Administration (OSHA)
29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity
Methanol: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Section 302 extremely hazardous substance No
Section 311 hazardous chemical Yes
Hazard categories (311/312) Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No
Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of New and Existing Chemicals (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>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</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).

State regulations

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

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Physical property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>Present</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>Environmental hazard</td>
</tr>
<tr>
<td>n-Butane</td>
<td>106-97-8</td>
<td>Present</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>Present</td>
</tr>
</tbody>
</table>

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 1*
Flammability: 3
Physical hazard: 0

Disclaimer

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

MSDS sections updated

This document has undergone significant changes and should be reviewed in its entirety.

Prepared by

Regulatory Compliance