MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION
Material Name : Isopropyl Alcohol, 91%
MSDS Date : 5 APRIL 1999
Supersedes : 11 MARCH 1997
Prepared By : M L RISSOLO

Hazard Rating
Health .......................................... 1
Fire .......................................... 3
Reactivity ........................................ 0
Personal Protective Equipment. B

Scale: 4- Extreme 1- Slight
3- High 0- Insignificant
2- Moderate

COMPONENT INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NO.</th>
<th>AMT.</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>67-63-0</td>
<td>91</td>
<td>400</td>
<td>500</td>
</tr>
</tbody>
</table>

Exposure Limit Information in ppm

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA</th>
<th>ACGIH</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOPROPYL ALCOHOL</td>
<td>REL TWA 15 min ceiling: 400 ppm</td>
<td>STEL TWA 10 hour (NIOHS) 800 ppm</td>
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EMERGENCY RESPONSE INFORMATION

FIRST AID PROCEDURES

Inhalation: Move patient to fresh air. Seek medical attention immediately, if unconscious. (Overexposure only likely with large quantities in a confined space.)

Eye Contact: Flush immediately with clean water for at least 15 minutes.

Skin Contact: Wash well with soapy water. Can cause irritation with repeated exposure.

Ingestion: If ingested, call a physician immediately. If patient is conscious, give water and induce vomiting.

SPILL OR LEAK HANDLING INFORMATION

Personal Protection: For small spills use rubber gloves & safety glasses. For larger spills use splash proof goggles or face shield & lab coat, apron, or overalls. In confined spaces, mask with organic vapor canister.

Procedures: Remove all ignition sources; ventilate area. Avoid contact with skin. Small quantities may be absorbed on paper towels and evaporated in a hood.
FIRE FIGHTING INFORMATION

Department of Transportation (DOT) Emergency Response Guide Number: 26

Unusual Hazards: Flammable liquid. Toxic gases (such as carbon monoxide and carbon dioxide) may be released in a fire. Vapors may travel long distances to ignition source and flash back. Dangerous fire hazard when exposed to heat, flame or oxidizers. Moderate explosion hazard when exposed to heat or flame.

Special Fire Fighting Procedures: Use water to keep fire exposed containers cool to disperse vapors, to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Extinguishing Agents: Dry chemical, water spray or alcohol resistant foam.

Personal Protective Equipment: Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

PHYSICAL/CHEMICAL CHARACTERISTICS

FIRE AND EXPLOSIVE PROPERTIES

Flash Point............................ 61°F TCC
Auto-Ignition temperature... Not available
Lower Explosive Limit.......... 2.0 %
Upper Explosive Limit......... 12.0 %

REACTIVITY INFORMATION

Stability: Stable
Conditions to Avoid: Heat and open flame.
Hazardous Polymerization: Will Not occur.
Incompatibility: Avoid strong oxidizing agents.

PERSONAL PROTECTION MEASURES

Respiratory Protection: For normal use, none generally required, when using large amounts in confined spaces use mask with organic vapor canister.
Eye Protection: For normal use, may wish to use safety glasses.
Hand Protection: Rubber gloves recommended.

FACILITY CONTROL MEASURES

Ventilation: Local - ventilation meeting ACGIH criteria. Explosion proof.
Other Protective Equipment: Use plastic or rubber apron to protect clothing, if needed.

STORAGE AND HANDLING INFORMATION

Storage Conditions: Usual precautions for flammable liquids.
Handling Procedures: All handling equipment should be electrically grounded. Do not allow persons to enter confined areas.
### SUPPLEMENTAL INFORMATION

**Typical Physical Properties**
- **Appearance**: Clear Liquid
- **Color**: Colorless
- **State**: Liquid
- **Odor Characteristic**: Characteristic Alcohol Odor
- **pH**: Not available
- **Viscosity**: Not available
- **Specific Gravity (Water = 1)**: 0.82
- **Vapor Density (Air = 1)**: 2.07
- **Melting Point**: <-63.4° F
- **Boiling Point**: 176-180 Degrees F
- **Solubility in water**: Completely Miscible
- **Percent Volatility**: Not available
- **Evaporation rate (Butyl Acetate = 1)**: 1.9

### TOXICITY INFORMATION

**Acute Data**
- **Oral LD50 (Rat)**: 5.84/Kg
- **Dermal LD50 (Rabbit)**: 16g/Kg
- **Skin Irritation**: Not Available
- **Eye Irritation**: Not Available

**WASTE DISPOSAL**: Disposal in landfill approved for same, away from water supplies. Incineration is an alternate method. Dispose of in accordance with applicable federal, state, and local regulations.
Celeste Industries Corp.  
P/N: LB136

REGULATORY INFORMATION

WORKPLACE CLASSIFICATIONS:
OSHA (USA): Not OSHA regulated. No ingredients identified by OSHA as hazardous are known to be present or the ingredients present are below the levels specified as hazardous by OSHA (Per 29 CFR 1910.1200)
WHMIS (Canada): Isopropyl Alcohol, 3.2, UN1219

TRANSPORTATION:

HAZMAT MARKING:
Domestic (US): Isopropyl Alcohol, UN1219
International (ICAO/IATA): Isopropanol [Isopropyl Alcohol], UN1219

HAZMAT LABEL:
Domestic (US): Flammable Liquid
International (ICAO/IATA): Flammable Liquid

Packing Group: II

EMERGENCY PLANNING & COMMUNITY RIGHT-TO-KNOW (SARA TITLE 3)

Section 311/312 Categorizations (40CFR 370): This material contains no health or environmental hazardous substance at a level which requires notification under the Act.
Section 313 Information (40CFR 372): This material contains no toxic chemical at a level which is reportable under SARA Toxic Chemical Release Reporting Regulations.
RCRA INFORMATION:
This material is not included in the lists of hazardous substances (40 CFR 261.33), nor does it exhibit the characteristics of hazardous waste (40 CFR 261.20-24)

Toxic Substances Control Act (TSCA):
All components in this material are in the TSCA Inventory

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Celeste Industries Corporation assumes no responsibility for personal injury or property damage to vendors, users or third parties caused by the material. Such vendors or users assume all risks associated with the use of the material.

ABBREVIATIONS:
ACGIH = American Conference of Government Industrial Hygienists
IATA = International Air Transport Association
ICAO = International Civil Aviation Organization
OSHA = Occupational Safety and Health Administration
PEL = Permissible Exposure
STEL = Short-Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weighted Average
WHMIS = Workplace Hazardous Materials Information System