Material Safety Data Sheet
1,1,2-Trichloro-1,2,2-trifluoroethane

Section 1 - Chemical Product and Company Identification

MSDS Name:
1,1,2-Trichloro-1,2,2-trifluoroethane

Catalog Numbers:
LC26260

Synonyms:
1,1,2-trichloro-1,2,2-trifluoroethane; BW440005

Company Identification:
LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:
(412) 826-5230

Emergency Phone Number:
(800) 424-9300

CHEMTREC Phone Number:
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-13-1</td>
<td>1,1,2-trichloro-1,2,2-trifluoroethane</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear, Colorless liquid.

Danger! Vapor reduces oxygen available for breathing. May cause rapid suffocation. May cause eye irritation. May cause central nervous system effects. May cause cardiac disturbances. May cause dermatitis.

Target Organs: Heart, central nervous system.

Potential Health Effects

Eye:
Contact produces irritation, tearing, and burning pain. May cause conjunctivitis.

Skin:
May cause skin irritation. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.

Ingestion:
Ingestion of large amounts may cause gastrointestinal irritation.
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**Inhalation:**
Inhalation of high concentrations may cause central nervous system effects characterized by headache, dizziness, unconsciousness and coma. Vapor reduces oxygen available for breathing. May cause heart disturbances, possibly leading to cardiac arrest and death. May cause narcotic effects.

**Chronic:**
Prolonged or repeated skin contact may cause defatting and dermatitis.

### Section 4 - First Aid Measures

**Eyes:**
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until chemical is gone. Get medical aid.

**Skin:**
Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:**
Give conscious victim 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:**
Move victim to fresh air immediately. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**
Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

**General Information:**
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may be flammable in vessels of adequate size. Slight fire hazard when exposed to heat or flame.

**Extinguishing Media:**
For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

**Autoignition Temperature:**
Not applicable.

**Flash Point:**
None.

**NFPA Rating:**
CAS# 76-13-1: Not published.

**Explosion Limits:**
Lower: No information  Upper: No information

### Section 6 - Accidental Release Measures

**General Information:**
Use proper personal protective equipment as indicated in Section 8.
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Spills/Leaks:
Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Remove all sources of ignition.

Section 7 - Handling and Storage

Handling:
Use with adequate ventilation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

Storage:
Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from metals. Do not store in aluminum containers.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:
Good general ventilation should be sufficient to control airborne levels.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name: 1,1,2-trichloro-1,2,2-trifluorothane</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1000 ppm TWA; 1250 ppm STEL</td>
<td>1000 ppm TWA; 7600 mg/m3 TWA</td>
<td>1000 ppm TWA; 7600 mg/m3 TWA</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs
1,1,2-trichloro-1,2,2-trifluoroethane: 1000 ppm TWA; 7600 mg/m3 TWA

Personal Protective Equipment

Eyes:
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin:
Wear appropriate gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to minimize contact with skin.

Respirators:
Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Colorless
Odor: Chloroform-like
pH: No information found.
Vapor Pressure: 294 mm Hg @ 20°C
Vapor Density: 6 (air=1)
Evaporation Rate: 0.45 (acetone=1)
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Viscosity: No information found.

Boiling Point: 118°F (48°C)

Freezing/Melting Point: -31°F (-35°C)

Decomposition Temperature: No information found.

Solubility in water: 0.028%

Specific Gravity/Density: 1.57

Molecular Formula: C2Cl3F3

Molecular Weight: 187.3542

Section 10 - Stability and Reactivity

Chemical Stability:
Stable.

Conditions to Avoid:
Incompatible materials, ignition sources, metals, strong oxidants.

Incompatibilities with Other Materials
Incompatible with alkali or alkaline earth metals such as sodium, potassium, aluminum, barium, lithium, samarium, sodium-potassium alloy, titanium, zinc, magnesium, and beryllium.

Hazardous Decomposition Products
Hydrogen chloride, phosgene, carbon monoxide, carbon dioxide, hydrogen fluoride gas.

Hazardous Polymerization
Has not been reported.

Section 11 - Toxicological Information

RTECS:
CAS# 76-13-1: KJ4000000.

LD50/LC50:
CAS# 76-13-1:
Oral, rat: LD50 = 43 gm/kg.
Inhalation, rat: LC50 = 105,000 ppm/1H

Carcinogenicity:
CAS# 76-13-1: Not listed as a carcinogen by ACGIH, NIOSH, NTP, IARC, OSHA or CA Prop 65.
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Epidemiology: No information found.
Teratogenicity: No information found.
Reproductive: No information found.
Mutagenicity: No information found.
Neurotoxicity: No information found.

Section 12 - Ecological Information
This material is a Class 1 ozone depleting material.

Section 13 - Disposal Considerations
Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information
US DOT

Shipping Name: Not regulated for ground transportation.

Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal
TSCA
CAS# 76-13-1 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ)
None of the components are on this list.

CERCLA/SARA Section 313
This material contains 1,1,2-trichloro-1,2,2-trifluoroethane (CAS# 76-13-1, 100%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous
None of the components are on this list.

US State
State Right to Know
1,1,2-trichloro-1,2,2-trifluoroethane can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations
None listed.

European/International Regulations
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**Canadian DSL/NDSL**
CAS# 76-13-1 is listed on Canada's DSL List.

**Canada Ingredient Disclosure List**
CAS# 76-13-1 is listed on Canada's Ingredient Disclosure List.

**Section 16 - Other Information**

MSDS Creation Date: February 17, 1999
Revision Date: August 28, 2008

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