



**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**

CAS#	Chemical Name:	Percent
76-13-1	1,1,2-trichloro-1,2,2-trifluoroethane	100

**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 cupful 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

Chemical Name:	ACGIH	NIOSH	OSHA
1,1,2-trichloro-1,2,2-trifluoroethane	1000 ppm TWA; 1250 ppm STEL	1000 ppm TWA; 7600 mg/m <sup>3</sup> TWA	1000 ppm TWA; 7600 mg/m <sup>3</sup> TWA;

### OSHA Vacated PELs

1,1,2-trichloro-1,2,2-trifluoroethane: 1000 ppm TWA; 7600 mg/m<sup>3</sup> TWA

## Personal Protective Equipment

### Eyes:

Wear appropriate protective eye glasses 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 29 CFR 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 mmHg @ 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:** C<sub>2</sub>Cl<sub>3</sub>F<sub>3</sub>

**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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