



Material Safety Data Sheet

1. Product and Company Identification

Product name : **2,2-Dichloro1,1,1-Trifluoromethane**

Chemical formula : C-H-F3

Synonyms : Trifluoromethane, Methane, Trifluoro-, Carbon Trifluoride, Methyl Trifluoride, Arcton 1, Fluoryl, Freon 23, Genetron 23, Propellant 23, Refrigerant 23, R23

Company : Specialty Gases of America, Inc
6055 Brent Dr.
Toledo, OH 43611

Telephone : 419-729-7732

Emergency : 800-424-9300

2. Composition/Information on Ingredients

Components	CAS Number	% Volume
2,2-Dichloro1,1,1-Trifluoromethane	75-46-7	100%

3. Hazards Identification

Emergency Overview

May cause central nervous system depression.
Containers may rupture or explode if exposed to heat.

Potential Health Effects

Inhalation : Mild irritation, nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, symptoms of drunkenness, disorientation.

Eye contact : Frostbite, blurred vision.

Skin contact : Blisters, frostbite.

Ingestion : Frostbite.

Chronic Health Hazard : Not applicable.

4. First Aid Measures

General advice : None.

Eye contact : Flush eyes with plenty of water.

Skin contact : If frostbite or freezing occur, immediately flush with plenty of lukewarm water (105-115 F; 41-46 C). DO NOT USE HOT WATER. If warm water is not available, gently wrap affected parts in blankets. Get immediate medical attention.

Ingestion : If a large amount is swallowed, get medical attention.

Inhalation : If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

5. Fire-Fighting Measures

- Suitable extinguishing media : Regular dry chemical, carbon dioxide.
- Specific hazards : Negligible fire hazard. Containers may rupture or explode if exposed to heat.
- Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Use extinguishing agents appropriate for surrounding fire. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Do not get water directly on material. Reduce vapors with water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Consider downwind evacuation if material is leaking.

6. Accidental Release Measures

- Personal precautions : None.
- Environmental precautions : None.
- Methods for cleaning up : Stop leak if possible without personal risk. Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.
- Additional advice : None.

7. Handling and Storage

Handling

Secure cylinder when using to protect from falling. Use suitable hand truck to move cylinders.

Storage

Store in accordance with all current regulations and standards. Subject to storage regulation: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.

8. Exposure Controls / Personal Protection

Engineering measures

Not available.

Personal protective equipment

- Respiratory protection : Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use. Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode. Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode. For unknown concentration or immediately dangerous to life or health – any supplied-air respirator with full facepiece and operated in pressure-demand or other positive-pressure mode in combustion with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- Hand protection : Wear insulated gloves.
- Eye protection : For the gas: Eye protection is not required, but recommended. For the liquid: Wear splash resistant safety goggles. Contact lenses should not be worn. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
- Skin and body protection : For the gas: Protective clothing is not required. For the liquid: Wear appropriate protective, cold insulating clothing.
- Ventilation : Provide local exhaust ventilation system. Ensure compliance with applicable

Remarks : exposure limits.
: None.

9. Physical and Chemical Properties

Form : Gas.
Color : Colorless.
Odor : Odorless.
Molecular weight : 70.01
Vapor pressure : 33592 mmHg @ 21 C
Vapor density : 2.417 @ 25 C (air = 1)
Specific gravity : Not applicable.
Boiling point : -116 F (-82 C)
Freezing point : -256 F (-160 C)
Water solubility : 0.1% @ 25 C
Solvent solubility : Soluble: alcohol, acetone, benzene, hydrocarbons, chlorinated solvents, ketones, esters, organic acids.
Insoluble: glycols, glycerol, phenols.

10. Stability and Reactivity

Stability : Stable under normal conditions.
Conditions to avoid : Protect from physical damage and heat. Containers may rupture or explode if exposed to heatl.
Materials to avoid : Metals.
Hazardous decomposition products : Thermal decomposition products: oxides of carbon.

11. Toxicological Information

Acute Health Hazard

Ingestion : Not available.
Inhalation : Not available.
Skin : Not available.

12. Ecological Information

Not available.

13. Disposal Considerations

Waste from residues : Dispose in accordance with all applicable regulations.
/ unused products
Contaminated packaging : Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name : Trifluoromethane
Class : 2.2

UN/ID No. : UN1984
Labeling : Non-Flammable Gas.

Further information

Cylinders should be transported in a secure upright position in a well ventilated truck.

15. Regulatory Information

OSHA Process Safety (29 CFR 1910.119) Hazard Class(es)

Not regulated.

TCSA

Material is listed in TSCA inventory.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR 355.30)

Not regulated.

SARA Title III Section 304 Extremely Hazardous Substances (40 CFR 355.40)

Not regulated.

SARA Title III SARA Sections 311/312 Hazardous Categories (40 CFR 370.21)

Acute: Yes

Chronic: No

Fire: No

Reactive: No

Sudden Release: Yes

SARA Title III Section 313 (40 CFR 372.65)

Not regulated.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

For additional information, please visit our website at www.americangasgroup.com.