



Material Safety Data Sheet

1. Product and Company Identification

Product name : **Dichlorofluoromethane**

Chemical formula : C-H-CL₂-F

Synonyms : Dichloromonofluoromethane; Freon 21; Algofrene Type 5; Arcton 7; Genetron 21; Fluorodichloromethane

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
Dichlorofluoromethane	75-43-4	100%

3. Hazards Identification

Emergency Overview

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

Potential Health Effects

Inhalation : Ringing in the ears, irregular heartbeat, drowsiness, symptoms of drunkenness.
Eye contact : Blurred vision, frostbite.
Skin contact : Frostbite.
Ingestion : Frostbite, irregular heartbeat, symptoms of drunkenness, liver damage.
Chronic Health Hazard : Not applicable.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

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 blanket. 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.

Note to physicians : For inhalation, consider oxygen.

5. Fire-Fighting Measures

Suitable extinguishing media : Carbon dioxide, regular dry chemical.
Large fires: Use regular foam or flood with fine water spray.
Specific hazards : Negligible fire hazard.
Fire fighting : Move container from fire area if it can be done without risk. Cool containers with water spray until well after 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

Occupational spill/release : 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.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH : 10 ppm TWA
OSHA (final) : 1000 ppm TWA; 4200 mg/m³ TWA
OSHA (vacated) : 10 ppm TWA; 40 mg/m³ TWA
NIOSH : 10 ppm TWA; 40 mg/m³ TWA

IDLH

5000 ppm

Engineering measures/Ventilation

Based on available information, ventilation is not required. Ensure compliance with applicable exposure limits.

Personal protective equipment

Respiratory protection : The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.
100 ppm – Any supplied-air respirator.
250 ppm – Any supplied-air respirator operated in continuous-flow mode.
500 ppm – Any self-contained breathing apparatus with a full facepiece. Any supplied-air respirator with a full facepiece.
5000 ppm – Any supplied-air respirator operated in pressure-demand or other

positive-pressure mode.

Emergency or planned entry into unknown concentrations or IDLH conditions – Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Escape – Any air-purifying respirator (gas mask) with a chin-style, front-mounted or back-mounted canister providing protection against the compound of concern.

Any appropriate escape-type, self-contained breathing apparatus.

Hand protection	:	Wear insulated gloves.
Eye protection	:	Wear splash resistant safety goggles with a faceshield. 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, but recommended. For the liquid: Wear appropriate protective, cold insulating clothing.

9. Physical and Chemical Properties

Form	:	Liquefied gas.
Color	:	Colorless.
Odor	:	Faint odor, sweet odor.
Molecular weight	:	102.92
Vapor pressure	:	1520 mmHg @ 28.4°C
Vapor density	:	3.82 (air = 1)
Specific gravity	:	1.426 @ 0°C (water = 1)
Boiling point	:	48°F (8.9°C)
Melting point	:	-211°F (-135°C)
Water solubility	:	1%
Solvent solubility	:	Soluble: alcohol, ether

10. Stability and Reactivity

Stability	:	Stable at normal temperatures and pressure.
Conditions to avoid	:	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.
Materials to avoid	:	Metals.
Hazardous decomposition products	:	Thermal decomposition products: Acid halides, chlorine, halogens, phosgene.

11. Toxicological Information

The components of this material have been reviewed in various sources and the following selected endpoints are published:

DICHLOROFLUOROMETHANE : Inhalation LC50 Rat: 49900 ppm/4H
(75-43-4)

Acute Toxicity Level

DICHLOROFLUOROMETHANE : Slightly toxic: inhalation
(75-43-4)

Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, NTP, OSHA or DFG.

Target Organs

DICHLOROFLUOROMETHANE : Central nervous system
(75-43-4)

12. Ecological Information

No LOLI ecotoxicity data are available for this product's components.

13. Disposal Considerations

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

14. Transport Information

DOT (US only)

Proper shipping : Dichlorofluoromethane
name
Class : 2.2
UN/ID No. : UN1029
Labeling : Non-Flammable Gas

15. Regulatory Information

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

DICHLOROFLUOROMETHANE : SARA 313: 1.0 % de minimis concentration
(75-43-4)

SARA 311/312

Acute: Yes
Chronic: No
Fire: No
Reactive: No
Pressure: Yes

U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
DICHLOROFLUOROMETHANE	75-43-4	Yes	Yes	Yes	Yes	Yes	Yes

Not regulated under California Proposition 65.

16. Other Information

Prepared by : Specialty Gases of America, Inc.
For additional information, please visit our website at www.americangasgroup.com.