Material Safety Data Sheet

1. Product and Company Identification

Product name : **Chlorodifluoromethane**

Chemical formula : CHClF2

Synonyms : Halocarbon-22, Freon 22

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
Chlorodifluoromethane	75-45-6	99+%

3. Hazards Identification

Emergency Overview

Liquid and gas under pressure.
Can cause rapid suffocation.
May cause frostbite.

Potential Health Effects

Inhalation : Stimulation followed by depression of central nervous system and possible asphyxiation. Asphyxiant at high concentrations can cause dizziness, disorientation, nausea, or vomiting. May have an anesthetic effect resulting in dizziness, headache, confusion, incoordination and loss of consciousness. Higher concentrations may alter the heart's electrical activity with irregular pulse, palpitations, or inadequate circulations. Pressure drop through valves and piping may cause extreme cold and frostbite on contact.

Eye contact : Not identified as primary route of entry.

Skin contact : Frostbite.

Ingestion : Not identified as primary route of entry.

Chronic Health Hazard : None known.

4. First Aid Measures

General advice : None.

Eye contact : Immediately flush with copious amounts of water for at least 15 minutes.

Skin contact : If frostbite occurs, flush affected area with lukewarm water.

Ingestion : None.

Inhalation : Immediately remove victim to fresh air. If breathing is difficult, give oxygen. If

breathing has stopped, give artificial respiration.

5. Fire-Fighting Measures

Suitable extinguishing media	:	Use what is appropriate for surrounding fire.
Specific hazards	:	Cylinder rupture may occur under fire conditions. Material is not flammable at ambient temperature and pressure, but is flammable in air and oxygen at elevated pressures.
Special protective equipment for fire-fighters	:	Wear self contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray.

6. Accidental Release Measures

Personal precautions	:	None.
Environmental precautions	:	None.
Methods for cleaning up	:	Evacuate and ventilate area. Shut off source if possible and remove source of heat. Try to prevent release to atmosphere due to potential decomposition of ozone in the atmosphere.
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 well ventilated areas. Keep valve protection cap on cylinders when not in use.

8. Exposure Controls / Personal Protection

Engineering measures

Provide adequate general and local exhaust ventilation to maintain concentrations below exposure limits.

Personal protective equipment

Respiratory protection	:	Use a self-contained breathing apparatus in case of leakage.
Hand protection	:	Protective gloves to prevent contact with cold equipment.
Eye protection	:	Safety glasses. A safety shower and eyewash station should be readily available.
Skin and body protection	:	Protective clothing and safety shoes when handling cylinders.
Remarks	:	None.

9. Physical and Chemical Properties

Form	:	Gas.
Color	:	Colorless.
Odor	:	Slight ethereal odor.
Vapor pressure	:	760 mmHg @ -40.8 C
Vapor density	:	2.98 (Air = 1)
Boiling point (C)	:	-40.8 C

Water solubility	:	0.3% by wt
Specific gravity	:	Gas.
Evaporation rate	:	Gas.

10. Stability and Reactivity

Stability	:	Stable under normal conditions.
Conditions to avoid	:	Storage in poorly ventilated areas. Storage near a heat source.
Materials to avoid	:	Alkali or alkaline earth metals such as sodium and potassium.
Hazardous decomposition products	:	Chlorides and fluorides. Hydrochloric acid and hydrofluoric acid, possibly carbonyl halides.

11. Toxicological Information

Toxicity Data

LC50 1 hr, rat = 175000 ppm.

Acute Health Hazard

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

12. Ecological Information

The material is a Class 2 ozone depleting material.

13. Disposal Considerations

Waste from residues / unused products	:	Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.
Contaminated packaging	:	Return cylinder to supplier.

14. Transport Information

DOT (US only)

Proper shipping name	:	Chlorodifluoromethane, R22
Class	:	2.2
UN/ID No.	:	UN1018
Labeling	:	Non-flammable Gas

Further information

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

15. Regulatory Information

OSHA Hazard Communication Standard (29 CFR 1910.1200) Hazard Class(es)

Material is not listed in appendix A of 29 CFR 1910.119 as highly hazardous chemical.

TCSA

Material is listed in TSCA inventory.

SARA

The threshold planning quantity for material is 10000 lbs.

Number in Annex 1 of DIR 67/548

Not listed in annex 1.

16. Other Information

Prepared by : Specialty Gases of America, Inc.

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