

HINDUSTAN FLUOROCARBONS LIMITED
MATERIAL SAFETY DATA SHEET
CFM22

MSDS NO. HFL/CFM22

1/5 PAGES

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- 1.1 PRODUCT NAME : CFM22
- 1.2 COMMON/CHEMICALNAME : CHLORODIFLUOROMETHANE
- 1.3 FORMULA : CHCIF2
- 1.4 MOLECULAR WEIGHT : 86.47
- 1.5 MANUFACTURER : HINDUSTAN FLUOROCARBONS LIMITED
1402, BABUKHAN ESTATE, BASHEERBAGH,
HYDERABAD, INDIA.
PHONE: 0091- 40 - 23297160
FAX NO: 0091- 40 - 23296455.

2. COMPOSITION /INFORMATION ON INGREDIENTS

2.1	INGREDIENTS	CAS #	%
	CHLORODIFLUOROMETHANE	75-45-6	100

3. HAZARDOUS IDENTIFICATION

Potential Health Effects

Inhalation of high concentrations of vapour is harmful and may cause heart irregularities, unconsciousness or death. Intentional misuse or deliberate inhalation can be fatal. vapours are heavier than air and pose a threat of suffocation if trapped in enclosed or low places. Liquid contact can cause frostbite. Inhalation may cause dizziness, headache, confusion, in coordination, and loss of consciousness.

Immediate effects of over exposure by inhalation may include central nervous system depression with dizziness, confusion, in coordination, drowsiness or unconsciousness, Gross overexposure may cause irregular heart beat with strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Other effects include fatality from gross over-exposure.

Short-term overexposure by skin contact may cause frostbite, if liquid or escaping vapour contacts the skin. Repeated and/or prolonged exposure may cause degatting of the skin with itching, redness or rash. Data to evaluate the skin permeation hazard of this compound are insufficient. There are no reports of human sensitization.

Contact with vapour or aerosol may cause eye irritation with tearing, pain or blurred vision.

Increased susceptibility to the effects of this material may be observed in persons with pre-existing disease of the central nervous system, cardiovascular system.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

4. FIRST AID MEASURES

Inhalation

If inhaled, immediately remove to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact

In case of contact, flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician.

Eye Contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion

Ingestion is not considered a potential route of exposure.

5. FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

FLASH POINT : Will not burn

AUTODECOMPOSITION : 632°C (1170°C)

Other burning materials may cause "CFM22" to burn weakly.

Chlorodifluoromethane is not flammable at ambient temp. and atmospheric pressure. However, Chlorodifluoromethane has been shown in tests to be combustible at pressures as low as 60 psig at ambient temp. When mixed with air at concentrations of 65 % v/v of air. Experimental data have also been reported which indicate combustibility of CFM22 in the presence of certain concentrations of Chlorine.

Fire and Explosion Hazards

Cylinders may rupture under fire conditions. Decomposition may occur.

Extinguishing Media

As appropriate for combustibles in area. Extinguishant for other burning material in areas is sufficient to stop burning.

Fire fighting Instructions

Use water spray or fog to cool container. Self-contained breathing apparatus (SCBA) is required if cylinders rupture or contents are released under fire conditions. Water runoff should be contained and neutralized prior to release.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

Note: Review FIRE FIGHTING MEASURES AND HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate personnel protective equipment during clean-up.

Accidental Release Measures

Ventilate area, especially low or enclosed places where heavy vapours might collect. Remove open flames. Use self-contained breathing apparatus (SCBA) for large spills or releases.

7. HANDLING AND STORAGE

Handling (Personnel)

Use with sufficient ventilation to keep employees exposure below recommended limits. CFM22 should be mixed with air for leak testing. In general, it should not be used or allowed to be present with high concentrations of air above atmospheric pressure. Contact with chlorine or other strong oxidising agents should be avoided.

Storage

Clean, dry area. Do not heat above 52 Deg C (125 Deg F)

8. EXPOSURE CONTROLS /PERSONAL PROTECTION

Engineering controls

Normal ventilation for standard manufacturing procedures is generally adequate. Local exhaust should be used when large amounts are released. Mechanical ventilation should be used in low or enclosed places.

Personal protective equipment

Impervious gloves and chemical splash goggles should be used when handling liquid. Under normal manufacturing conditions, no respiratory protection is required when using this product. Self-contained breathing apparatus is required if a large release occurs.

9. PHYSICAL AND CHEMICAL RPOPERTIES

Physical Data

Boiling point	: -40.8 Deg C
Vapour pressure	: 151 psig @25 deg C
Vapour density	: 3.03 (Air = 1.0) @ 25 deg C
% volatiles	: 100 %
Evaporation rate	: > 1 (CCl4= 1.00)
Solubility in water	: 0.3 %w/w @ 25 Deg C
pH	: Neutral
Odor	: Slight ethereal
Form	: Liquified gas
Colour	: Clear, colourless
Liquid density	: 1.194 g/cc @25 deg C

10. STABILITY AND REACTIVITY

Chemical Stability

Material is stable. However, avoid open flames and high temperatures

Incompatibility with other materials

Incompatibility with alkali or alkaline earth metals-powdered Al, Zn, Be, Etc

Decomposition

Decomposition products are hazardous. CFM22 can be decomposed by high temp.(open flames, glowing metal surfaces, etc) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides. These materials are toxic and irritating. Contact should be avoided.

Polymersation

Polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

Inhalation:

4 hour, LC 50, rat: 2, 20,000 ppm.

Animal testing indicates this material is a slight eye irritant.

Animal testing indicates this material is a skin irritant, but not a skin sensitizer.

Long-term exposure by ingestion caused no significant toxicological effects

12. TRANSPORT INFORMATION

Shipping Information

Proper shipping name	: CHLORODIFLUOROMETHANE
Hazard class	: 2.2
UN No.	: 1018
Dot/Imo label	: NONFLAMMABLE GAS

Shipping containers

Tank cars
tank trucks
cylinders

13. OTHER INFORMATION

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