



Material Safety Data Sheet

MS-122 Fluorocarbon Release Agent

IDENTIFICATION

HMIS*

H HEALTH	2
F FLAMMABILITY	0
R REACTIVITY	0
PERSONAL PROTECTION <small>NC-1503R ©1991 NFPA</small>	B

Name: MS-122 Fluorocarbon Release Agent	Chemical Family: Not applicable
Synonyms: Not applicable	Formula.: CC13F CC12F2 CC12FCC1F2
CAS Name: Trichlorotrifluoroethane Trichlorofluoromethane Dichlorodifluoromethane	CAS Registry No.: 76-13-1 75-69-4 75-71-8
Manufacturer/Distributor: Miller-Stephenson Chemical Co.	Medical Emergency Phone: (203) 797-2212
Address: George Washington Highway Danbury, Conn. 06810	Transportation Emergency Phone: (800) 424-9300

PHYSICAL DATA

Boiling Point (*F): 75	Percent Volatile by Volume: 99
Density: 1.6g/cc @77°F	Vapor Pressure: 250mm Hg @68°F
Vapor Density (Air = 1): 6.0 @68°F	Solubility in H₂O: negligible
pH Information: 5.0	Evaporation Rate (n-BuAc = 1): 1
Form: Dispersion	Appearance: Milky
Color: White	Odor: Faint solvent odor.

HAZARDOUS COMPONENTS

Material(s): Trichlorotrifluoroethane Trichlorofluoromethane Dichlorodifluoromethane Telomer of Tetrafluoroethylene	Approximate % : 3-5 45-50 45-50 1-2
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HAZARDOUS REACTIVITY

Stability: Material is stable. However, avoid spraying near open flames or red hot coils.	Decomposition: This compound can be decomposed by high temperatures, (>300°F), emitting halogen acids, phosgene in smaller amounts and perfluorocarbons.
Incompatibility: Finely divided reactive metals.	Polymerization: Will not occur.

FIRE AND EXPLOSION DATA

Flash Point: None	Method: TOC
Autoignition Temperature: Not determined	Flammable Limits in Air, % by Vol. Non-Flammable
Autodecomposition Temperature: Not determined	Fire and Explosion: Pressurized aerosol containers at elevated temperatures may vent, rupture or burst and add to flying and falling debris. Intense heat may cause decomposition with emission of halogen acids.

**FIRE AND EXPLOSION DATA
(Cont)**

Extinguishing Media:
"Alcohol" foam. Dry powder (sand or Met-L-X), CO₂.

Special Fire Fighting Instructions:
Evacuate personnel to a safe area. Decomposition at flame temperatures forms potentially toxic compounds. Self-contained breathing apparatus may be required if cans rupture and contents are spilled under fire conditions.

HEALTH HAZARD INFORMATION

Principal Health Hazards:

Inhalation: Vapor is heavier than air and can cause suffocation by reducing oxygen available. Excessive inhalation of concentrated vapor may lead to dizziness, narcosis, anesthesia, cardiac irregularities, unconsciousness or death. Excessive inhalation of pyrolyzed fumes: flu like "polymer fume fever."

Skin: Mild skin irritant. Repeated skin contact can cause defatting of the skin.

Eye: Contact will cause irritation.

Oral: Although the oral toxicity is low, ingestion is to be avoided.

Exposure Limits:

<u>Material</u>	<u>TLV (ACGIH)</u>	<u>PEL (OSHA)</u>
Dichlorodifluoromethane	1000 ppm	1000 ppm
Trichlorotrifluoroethane	1000 ppm	1000 ppm
Trichlorofluoromethane	1000 ppm	1000 ppm
MS-122 (calc.)	Cannot be determined	

Safety Precautions: Avoid breathing vapors and liquid contact with skin and eyes. Wash hands thoroughly after handling. Avoid contamination of tobacco or smoking with contaminated hands.

First Aid:

Inhalation: Move patient to fresh air. If necessary, give artificial respiration or oxygen. If breathing is difficult, call a physician. DO NOT give epinephrine or similar drugs as such drugs may induce ventricular arrhythmia. Pyrolyzed fumes inhalation: Normal recovery occurs with 1-2 days.

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

Skin: The compound is not likely to be hazardous by skin contact, but flushing skin is advisable after use and on contact.

Note to Physician: Because of a possible increased risk of eliciting cardiac dysrhythmias, catecholamine drugs, such as epinephrine, should be considered only as a last resort in life-threatening situations.

Oral: If swallowed, do not induce vomiting. Immediately give two glasses of water or activated charcoal slurry. Never give anything by mouth to an unconscious person. To prepare activated charcoal slurry, suspend 50 g activated charcoal in 400 ml water. Shake well. Administer 5 ml/kg or 350 ml for average adult.

Medical Conditions Possibly Aggravated by Exposure:

Cardiovascular Disease: See Principal Health Hazards: Inhalation section.



HEALTH HAZARD INFORMATION
(Cont)

Other Health Hazards:

None of the components in this chemical are listed as a carcinogen by IARC, NTP, or OSHA. Based on animal studies and human experiences, these fluorocarbons pose no hazard to man relative to systemic toxicity, carcinogenicity, mutagenicity, or teratogenicity when occupational exposures are below its recommended TLV.

PROTECTION INFORMATION

Generally Applicable Control Measures:

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 places. Do not consume food, drink, or tobacco in the areas where they may become contaminated with this material.

Personal Protective Equipment:

Protective gloves should be used to avoid prolonged or repeated exposure. Do not spray liquid on hands. Chemical splash goggles should be available for use as needed to prevent eye contact. Do not direct spray to eyes.

DISPOSAL INFORMATION

Spill, Leak or Release:

Propellant vapors tend to concentrate in low places. Ventilate area. Dike spill, collect on absorbent material and transfer to steel drums for recovery or disposal. Flush spill area with water. Do not burn. Comply with federal, state, and local regulations on reporting releases.

Waste Disposal:

Do not puncture or incinerate aerosol cans. Treatment, storage, transportation, and disposal must be in accordance with federal, state, and local regulations.

SHIPPING INFORMATION

Domestic - Other Than Air (DOT)

Proper Shipping Name: Compressed gas, NOS Dichlorodifluoromethane
Hazard Class: 2
UN No.: 1956
DOT Label: Green, Non-flammable Gas
DOT Placard:

International Water or Air (IMO/ICAO)

Proper Shipping Name: Compressed gas, NOS Dichlorodifluoromethane
Hazard Class: 2
UN No.: 1956
IMO/ICAO Label: Green, Non-flammable Gas

Other Information

Shipping Containers: Aerosol Cans

Storage Conditions: Do not store near sources of heat, in direct sunlight or where temperature exceeds 49°C /120°F. Do not puncture or damage containers. Do not store or consume food, drink or tobacco in area where it has become contaminated with this material. Freezing will affect the physical condition but will not damage. Thaw and mix before using. Rotate stock to shelf life of one year.

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Date Revised: 1/86

Person Responsible:

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