



Material Safety Data Sheet

MS-240AS Anti-Static Quik-Freeze*

IDENTIFICATION

Name: MS-240AS Anti-Static Quik-Freeze*	Chemical Family: Halogenated Hydrocarbon Alcohol
Synonyms: Not applicable	Formula: CCl ₂ F ₂ /CH ₃ OH
CAS Name: Methane, Dichlorodifluoro Methanol	CAS Registry No.: 75-71-8 67-55-1
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): -21.6	Percent Volatile by Volume: 100
Density: 1.311 g/cc @77°F	Vapor Pressure: 80 psig @77°F
Vapor Density (Air = 1): 4.2	Solubility in H₂O: 0.028% by wt @ 77°F.
pH Information: Neutral	Evaporation Rate (ether=1): >8
Form: Liquefied Gas	Appearance: Clear
Color: Colorless	Odor: Slight ethereal odor

HAZARDOUS COMPONENTS

Material(s): Dichlorodifluoromethane Methanol	Approximate % : 99 1
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HAZARDOUS REACTIVITY

Stability: Material is stable. However, avoid open flames and high temperatures.	Decomposition: Can be decomposed by high temperatures (open flames, glowing surfaces, etc.) forming hydrochloric and hydrofluoric acids - possible carbonyl halides.
Incompatibility: Alkali or alkaline earth metals; powdered Al, Zn, Be, etc.	Polymerization: Will not occur.

FIRE AND EXPLOSION DATA

Flash Point: None	Method: TOC
Aut ignition Temperature: Not determined	Flammable Limits in Air, % by Vol. Lower: Non-flammable Upper: 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:
Non-flammable

Special Fire Fighting Instructions:
Self-contained breathing apparatus (SCBA) may be required if aerosol cans rupture and contents are released under fire conditions.

HEALTH HAZARD INFORMATION

Principal Health Hazards:

Inhalation: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing high concentrations of vapor may cause light-headedness, giddiness, shortness of breath, and may lead to narcosis, cardiac irregularities, unconsciousness or death. LC50 rats, 800,000 ppm/30 min.; Methyl alcohol - LC 50 Rats 64,000 ppm/4 hrs.

Skin: Liquid contact can cause frostbite. Methanol is a skin irritant.

Eye: Liquid contact can cause frostbite. Methanol is an eye irritant.

Oral: Rats were fed Freon[®] 12 dissolved in peanut oil. No deaths occurred at highest feasible dose - 1000 mg/kg. Methanol - LD 50 Rats 5628 mg/kg. Ingestion of methanol may produce delayed and irreversible impairment of vision.

Exposure Limits:

<u>Material</u>	<u>TLV (ACGIH)</u>	<u>PEL (OSHA)</u>
Dichlorodifluoromethane	1000 ppm	1000 ppm
Methanol	200 ppm	200 ppm
MS-240AS	871 ppm (calc.)	

Safety Precautions: Avoid breathing vapors and liquid contact with skin or eyes. Do not turn aerosol can upside down when spraying. Use only in well-ventilated area.

First Aid:

Inhalation: Remove to fresh air, call a physician. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Do not give epinephrine or similar drugs.

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

Skin: Flush with water. Treat for frostbite if necessary.

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 emergencies.

Oral: Call a physician immediately. Induce vomiting to lessen chance of vision impairment. As an antidote, provide 100 ml. of 100 proof ethyl alcohol (grain alcohol) in 2000 ml. water. Never give anything by mouth to an unconscious person.

Medical Conditions Possibly Aggravated by Exposure:

Individuals with pre-existing diseases of the retina or liver may have increased susceptibility to the toxicity of excessive exposures to methanol.

Cardiovascular Disease - See Principal Health Hazard: Inhalation Section.

HEALTH HAZARD INFORMATION
(Cont)

Other Health Hazards:

Freon[®] 12 is not classified as carcinogenic by IARC, NTP, or OSHA. Based on animal studies and human experiences this fluorocarbon poses no hazard to man relative to systemic toxicity, carcinogenicity, mutagenicity, or teratogenicity when occupational exposures are below its 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.

Personal Protective Equipment:

Lined butyl gloves should be used when handling liquid. Chemical splash goggles should be available for use as needed to prevent eye contact. Under normal manufacturing conditions no respiratory protection is required when using this product. Self contained breathing apparatus is required if a large spill occurs. Do not spray liquid on skin.

DISPOSAL INFORMATION

Spill, Leak or Release:

Ventilate area - especially low places where heavy vapors might collect. Remove open flames.

Waste Disposal:

Disposal service to landfill is appropriate. Do not puncture or incinerate aerosol cans.

SHIPPING INFORMATION

Domestic - Other Than Air (DOT)

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

International Water or Air (IMO/ICAO)

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

Other Information

Shipping Containers: Aerosol cans

Storage Conditions: Do not store near sources of heat, in direct sunlight, or where temperatures exceed 49°C/120°F. Do not puncture or damage containers. Rotate stock to shelf life of one year.

Date Revised: 1/89

Person Responsible:
Janel Stephens,
Miller-Stephenson Chemical Co., Inc.
George Washington Highway
Danbury, Conn. 06810
(203) 743-4447

*Freon is DuPont's registered trademark for its fluorocarbon compounds.
*Registered trademark of Miller-Stephenson Chemical Co., Inc.