



Du Pont Chemicals

2022FR

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## "FREON" 12

### # MATERIAL IDENTIFICATION

Corporate Number	DU001065	
"FREON" is a registered trademark of Du Pont.		
Manufacturer/Distributor	Du Pont 1007 Market Street Wilmington, DE 19898	
Phone Numbers	Product Information	1-800-441-9442
	Transport Emergency	CHEMTREC: 1-800-424-9300
	Medical Emergency	1-800-441-3637
Chemical Family	HALOGENATED HYDROCARBON	
Trade Names and Synonyms	CC0112	
Du Pont Registry Number	DP23-00-1	
Formula	CCl <sub>2</sub> F <sub>2</sub>	
TSCA Inventory Status	Reported/Included	
NPCA-HMIS Ratings	Health:	1
	Flammability:	0
	Reactivity:	1
	Personal Protection rating to be supplied by user depending on use conditions.	

### COMPONENTS

Material	CAS Number	Percent
*METHANE, DICHLORODIFLUORO- ("FREON" 12)	75-71-8	100

\* Regulated as a Toxic Chemical under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

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**PHYSICAL DATA**

Boiling Point	-29.8°C (-21.6°F)
Vapor Pressure	94.5 psia at 25 deg C (77 deg F)
Vapor Density	4.26 (Air = 1.0) at 25 deg C (77 deg F)
% Volatiles	100 WT %
Water Solubility	0.028 WT % at 25°C (77°F) at 1 atm
pH	Neutral
Odor	Slight ethereal
Form	Liquified gas
Color	Clear, colorless
Density	1.315 g/cc at 25 deg C (77 deg F) - Liquid

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**HAZARDOUS REACTIVITY**

Instability	Material is stable. However, avoid open flames and high temperatures.
Incompatibility	Incompatible with alkali or alkaline earth metals- powdered Al, Zn, Be, etc.
Polymerization	Polymerization will not occur.
Decomposition	: Decomposition products are hazardous. "FREON" 12 can be decomposed by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrochloric and hydrofluoric acids, and possibly carbonyl halides.

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**FIRE AND EXPLOSION DATA**

Flash Point	Will not burn
Flammable Limits in Air, % by Volume	LEL Not applicable UEL Not applicable
Autoignition	>750°C (>1,382°F)
# Fire and Explosion Hazards	Cylinders may rupture under fire conditions. Decomposition may occur.
Extinguishing Media	As appropriate for combustibles in area.
# Special Fire Fighting Instructions	Use water spray or fog to cool containers. Self-contained breathing apparatus (SCBA) is required if cylinders rupture and contents are released under fire conditions.

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## # HEALTH HAZARD INFORMATION

Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Intentional misuse or deliberate inhalation may cause death without warning. Vapor reduces oxygen available for breathing and is heavier than air. Liquid contact can cause frostbite. May cause eye irritation.

### ANIMAL DATA:

Inhalation 30-minute LC50: 800,000 ppm in rats  
Oral ALD : >1,000 mg/kg in rats

Effects in animals from single high exposure by inhalation include anesthesia and irregular heartbeat (cardiac arrhythmias). Repeated inhalation exposures produced altered respiratory function. Long-term studies showed no significant clinical, blood chemistry or pathological effects following repeated exposures. The effects in animals from long-term ingestion of this material include slight alterations in blood chemistry and body weight gain. No other clinical, biochemical or pathological signs of toxicity have been observed.

Tests in animals demonstrate no carcinogenic activity and no developmental or reproductive toxicity. The compound does not produce heritable genetic damage in animals or genetic damage in bacterial and mammalian cell cultures.

### HUMAN HEALTH EFFECTS:

Human health effects of overexposure by eye contact with the vapor may include eye irritation with discomfort, tearing, or blurring of vision. Skin contact with the liquid may cause frostbite. Inhalation of the vapors may cause temporary nervous system depression with anesthetic effects such as dizziness, headache, confusion, incoordination, and loss of consciousness; temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation, or the effects of exclusion of oxygen with grossly excessive exposures.

Individuals with preexisting diseases of the central nervous or cardiovascular system may have increased susceptibility to the toxicity of excessive exposures.

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<b>Carcinogenicity</b>	None of the components in this material is listed by IARC, NTP, OSHA, or ACGIH as a carcinogen.
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### Applicable Exposure Limits

METHANE, DICHLORODIFLUORO- ("FREON" 12)	
AEL * (Du Pont)	None Established
TLV (ACGIH)	1,000 ppm, 4,950 mg/m <sup>3</sup> - 8 Hr TWA
PEL (OSHA)	1,000 ppm, 4,950 mg/m <sup>3</sup> - 8 Hr TWA

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\* AEL is Du Pont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

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<b>Safety Precautions</b>	Use with sufficient ventilation to keep employee exposure below recommended limits.
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## # FIRST AID

### INHALATION

If high concentrations are 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 skin with water. Treat for frostbite if necessary by gently warming affected area.

### 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.

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#### Notes to Physician

Because of a possible disturbance of cardiac rhythm, catecholamine drugs, such as epinephrine, should only be used with special caution in situations of emergency life support.

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## # PROTECTION INFORMATION

### Generally Applicable Control Measures and Precautions

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.

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### 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 (SCBA) is required if a large release occurs.

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## # DISPOSAL INFORMATION

### Spill, Leak, or Release

NOTE: Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with clean up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up.

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

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### Waste Disposal

Comply with Federal, State, and local regulations. Reclaim by distillation or remove to a permitted waste facility.

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**# SHIPPING INFORMATION**

<b>DOT/IMO</b>	
Proper Shipping Name	DICHLORODIFLUOROMETHANE
Hazard Class	2.2
UN No.	1028
DOT/IMO Label	NONFLAMMABLE GAS
Shipping Containers	Tank Car Cylinders Ton Tanks Reportable Quantity : 5,000 lbs./2,270 kg.

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**STORAGE CONDITIONS**

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

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**TITLE III HAZARD CLASSIFICATIONS**

Acute	Yes
Chronic	No
Fire	No
Reactivity	No
Pressure	Yes

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**LISTS:**

Extremely Hazardous Substance	-No
CERCLA Hazardous Substance	-Yes
Toxic Chemicals	-Yes

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The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS:

W. J. Brock  
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Wilmington, DE 19880-0709

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# Indicates updated section.

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End of MSDS