

# MATERIAL SAFETY DATA SHEET

## Section 1: Product & Company Identification

**Product Name:** Autofrost R-12 Substitute  
**Product Number (s):** 09853

Manufactured By: CRC Industries, Inc. (215) 674-4300  
885 Louis Drive, Warminster, PA 18974  
24-Hour Emergency Information: CHEMTREC (800) 424-9300

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## Section 2: Composition/Information on Ingredients

Component	CAS NUMBER	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Isobutane	75-28-5	NE	NE	1000 ppm	3 - 8
1-Chloro-1, 1-difluoroethane	75-68-3	NE	1000 ppm	NE	35 - 45
Chlorodifluoromethane	75-45-6	1000 ppm	NE	NE	50 - 60

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## Section 3: Hazards Identification

### Emergency Overview

Appearance & Odor: Colorless liquefied gas with faint ethereal odor..

Caution: Contents under pressure.

### Potential Health Effects:

- Inhalation: May produce anaesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on concentration and time of exposure.
- Eyes: Can cause severe irritation, redness, tearing, and blurred vision.
- Skin: Contact with evaporating liquid can cause frostbite.
- Ingestion: Liquid ingestion may cause frostbite. Aspiration hazard.

Carcinogenicity: OSHA: No IARC: No NTP: No  
Chronic Overexposure: Rapid heartbeats, depression of cardiac function.  
Medical Conditions Aggravated by Exposure: Risk to your health depends on the level and duration of exposure.

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## Section 4: First Aid Measures

- Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call a physician.
- Eyes: Flush with large amounts of water for 15 minutes. Consult with physician immediately if frostbite occurs.
- Skin: Get medical attention if there is evidence of tissue damage. Flush area with plenty of

water. Treat as frostbite.

Ingestion: Call a physician. Do not induce vomiting.

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Section 5: Fire-Fighting Measures

Flashpoint: None Method: TCC LEL: ND UEL: ND

Extinguishing Media: Dry chemical extinguisher, water

Hazardous Combustion Products: Thermal – Hydrogen fluoride, carbon monoxide and carbon dioxide

Fire-fighting Instructions: Cylinders may vent or rupture in fire conditions, leading to decomposition.

Use self-contained breathing apparatus. Use water spray to cool Cylinders to prevent bursting or venting under fire conditions. Product may be flammable if mixed with large quantities of air at greater than atmospheric pressure.

NFPA: Health: 1 Flammability: 0 Reactivity: 1  
HMIS: Health: 1 Flammability: 0 Reactivity: 1 PPE: B

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Section 6: Accidental Release Measures

Spill/Leak Procedures: Usually not a problem with aerosols. Area should be ventilated. Absorbent should be used to pick up excess material. All used and unused product should be disposed of in accordance with federal, state and local regulations.

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Section 7: Handling and Storage

Handling Procedures: Store in a cool, dry area. Aerosol cans must be maintained below 120°F to prevent cans from exploding.

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Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adequate to prevent accumulation of vapors. Use mechanical means if necessary to maintain levels below the exposure limits. If working in a confined space, follow applicable OSHA regulations.

Respiratory: Use NIOSH/MSHA compliant respirators or self-contained breathing apparatus above exposure limits. Follow OSHA regulations 29 CFR 1910.134.

Protective Clothing/Equipment: Wear chemically protective gloves and safety glasses. Use a splash apron and boots if splashing occurs.

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Section 9: Physical & Chemical Properties

Physical State: Liquid Appearance & Odor: Colorless liquefied gas with ethereal odor.  
Specific Gravity: 1.125 Boiling Point: -26°F

**Product Name: Autofrost R-12 Substitute****Product Number (s): 09853**

Freezing Point:	ND	Vapor Pressure:	95 PSIG @ 70 °F
Evaporation Rate:	ND	Vapor Density (air = 1)	>1
pH:	NA	Solubility:	Slight
Volatile Organic Compounds:%:	4	g/L: 45	lbs./gal: 0.37

## Section 10: Stability and Reactivity

Stability:	Stable	Hazardous Polymerization:	No
Chemical Incompatibilities:	Strong oxidants, including oxygen. Alkali metals, and alkali earth metals may cause exothermic reaction. Aluminum in refrigeration systems contains an oxide coating, so it does not react.		
Materials to Avoid:	High heat, spark, and open flames.		
Hazardous Decomposition Products:	Hydrofluoric and hydrochloric acids, chlorine, fluorine, possible phosgene and carbonyl acids, CO2 and CO.		

## Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

## Section 12: Ecological Information

Ecotoxicity:	No data available.
Environmental Fate:	No data available for biodegradation.

## Section 13: Disposal Considerations

Disposal: This material if discarded may be hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state and local regulations. Contact your local or state environmental agency for specific rules. Do not dump into sewers, on the ground or into any body of water.

## Section 14: Transportation Information

Shipping Name:	Compressed Gas, N.O.S.(Chlorodifluoromethane, Chlorodifluoroethane)		
Hazard Class:	2.2	UN Number: 1956	Packing Group: NA
Label:	2.2	Placard:	Nonflammable gas
Special Provisions:	NA		

## Section 15: Regulatory Information

TSCA:	All components are either listed under TSCA or are exempt.		
SARA Title III:	Section 311/312:	Acute, Pressure	
Section 313 : Chlorodifluoromethane, 1-Chloro-1, 1-difluoroethane			
CERCLA/Superfund (RQ):	NA		
Extremely Hazardous Substances:	No		

California Prop 65:

No

\* See section 2 for percentage

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Section 16: Additional Information

Prepared By: Michelle Rudnick Date: September 8, 2006

Technical Information: (800) 521-3168 CRC #: 00152A

This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS: Chemical Abstract Service  
ppm: Parts per Million  
TCC: Tag Closed Cup  
LEL: Lower Explosive Limit  
UEL: Upper Explosive Limit  
PPE: Personal Protection Equipment  
COC: Cleveland Closed Cup

NA: Not Applicable  
ND: Not Determined  
NE: Not Established  
g/L: grams per Liter  
lbs./gal: pounds per gallon  
RQ: Reportable Quantity