



MATERIAL SAFETY DATA SHEET

IDENTITY: HALOCARBON 1.8, 1.8D OIL

SECTION I: MANUFACTURER

HALOCARBON PRODUCTS CORPORATION      Emergency Number:                    (803) 278 3504  
P.O. Box 661                                    Customer Service & Sales:    (201) 262 8899  
River Edge, NJ 07661  
  
Prepared by: Dr. Lee G. Sprague

SECTION II: CHEMICAL IDENTITY

Components	CAS No.	OSHA PEL	ACGIH TLV	Other Limits
Polychlorotrifluoroethylene	9002-83-9	None	None	None

"S" oil contains a proprietary rust inhibitor.

OSHA HAZARD RATING:

This product contains the following toxic chemical(s) subject to Section 313 Title III reporting requirements (40 CFR Part 372):

NONE

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point : ca 205 C                                    Vapor Pressure: ca 1 mm Hg (21 C)  
Melting Point : < -90 C                                    Vapor Density(Air=1): N/A  
Specific Gravity(H2O=1): 1.8 (38 C)                    Solubility in Water : Negligible

Appearance and Odor: Colorless liquid with slight ethereal odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point/Method: None                                    Autoignition Temp: Not determined  
Flammability Limits in Air - LEL: N/A                    UEL: N/A

Extinguishing Media: Use agent appropriate for surrounding fire.

Special Fire Fighting Procedures: Wear SCBA if there is danger of leakage in fire.

Unusual Fire and Explosion Hazards: Thermal decomposition products are toxic and corrosive. See Section V.



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SECTION V - REACTIVITY DATA

Unstable  Conditions to Avoid: N/A  
Stable

Incompatibility (Materials to Avoid): Reacts with active metals like sodium and potassium, amines (including additives), liquid fluorine and liquid chlorine trifluoride. Caution should be used with aluminum and magnesium under conditions of large shear forces such as those found in threaded connections.

Hazardous Decomposition or By-products: The decomposition to toxic, non-sludge forming volatile compounds occurs rapidly at 325C, noticeably at 300C and in lesser amounts at lower temperatures. Therefore, the maximum safe operating temperature recommended is 200C and maximum short term temperature recommended is 260C in scrupulously clean systems.

Hazardous Polymerization  May Occur  Will Not Occur  
Conditions To Avoid: N/A



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SECTION VI - HEALTH HAZARD DATA

Halocarbon 0.8 oil produced no deaths among 10 rats upon an 8 hr. exposure to 2650 ppm (34.3 mg/L) during a 1999 study and is considered by OSHA definition to be nontoxic. The animals showed no effects during exposure or 14 days afterward. All animals gained weight during the 14 day observation period. Autopsy showed no macroscopic abnormalities.

Extensive toxicity studies have been conducted on a slightly heavier Halocarbon oil (3.1). Based on all the available data in three species of animals, limited exposure to Halocarbon oil should not be harmful to any portion of the human anatomy. Studies conducted by the Air Force have demonstrated liver toxicity in rodents, but not in primates. The observed

liver toxicity is believed to be specific for rodents and not relevant to humans. Halocarbon oil is not irritating to skin but skin protection should be used to prevent repeated exposure and the possibility of sensitization. All mutagenicity studies were negative.

Since the potential for human toxicity cannot be ruled out, proper ventilation and work practices should be employed.

Primary routes of entry:  Inhalation  Skin  Eyes  Oral

Acute Effects of Overexposure: From animal studies, signs of fluoride poisoning may be expected. These include nausea, shortness of breath and loss of appetite.

Chronic Effects of overexposure: Unknown

Carcinogenicity listing:  NTP  IARC  OSHA  
 Other:

First Aid

Inhalation: Remove to fresh air. Apply artificial respiration if needed.  
Seek medical help

Skin: Wash with soap and water. No skin effects expected.

Eye: Flush eyes immediately with water for at least 15 minutes.  
Seek medical help.

Oral: Try to induce vomiting. Seek medical help.

Medical Conditions Generally Aggravated by Exposure: None known

Other Health Hazards: None known.



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SECTION VII - PROTECTION INFORMATION

Respiratory: None normally required. For large spills wear SCBA.

Ventilation: Adequate general ventilation plus local exhaust at points of emission.

Eye and Face: Safety glasses/goggles or face shield.

Gloves: Impervious gloves.

Other equipment: None normally required.

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SECTION VIII - SPILL, LEAK AND DISPOSAL PROCEDURES

Spill, Leak or Release: Spills may be picked up with absorbent such as vermiculite and held in covered container for disposal.

Waste Disposal: May be incinerated by licensed waste disposal company. Observe all federal, state and local regulations.

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SECTION IX - OTHER INFORMATION

1. Hazardous Materials/Dangerous Goods Shipping Regulations

U.S. (49 CFR): Proper Shipping Name: Non-Hazardous Material

IATA: Proper Shipping Name: Non-Dangerous Goods

IMDG: Proper Shipping Name: Non-Dangerous Goods

2. Other Information: HMIS Labeling: H 1; F 0; R 0; P B

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REVISED: JANUARY 18, 2005