



SDS – SAFETY DATA SHEET

1. IDENTIFICATION

Product Identifier: HALOCARBON 1.8, 1.8D, 1.8M, 1.8HPT, 1.8NG, 2.25 OIL (9002-83-9)

Synonyms: Polychlorotrifluoroethylene

Chemical Formula: Cl-(C₂F₃Cl)_n-Cl

Recommended Use of the Chemical: Industrial Lubricant

Uses Advised Against: No information available

Uses Advised Against: Not for drug, household or other uses.

Manufacturer / Supplier: HALOCARBON PRODUCTS CORPORATION

Address: 1100 Dittman Court, North Augusta, SC USA

Website: www.halocarbon.com

Email: sds@Halocarbon.com

Phone: (803)278-3504

Emergency CHEMTREC Phone: (800) 424-9300 United States / 001-703-527-3887 International and Maritime

2. HAZARD(S) IDENTIFICATION

Classification of the Substance or Mixture: Not classified

Risk Phrases: None

Label Elements:

Signal Word: None

Pictogram: None

Hazard Statements: None

Precautionary Statements: None

Other Hazards:

Substance Meets the Criteria for PBT According to Regulation (EC) No. 1907/2006 Annex XIII:

PBT: Not applicable

Substance Meets the Criteria for vPvB According to Regulation (EC) No. 1907/2006 Annex XIII:

vPvB: Not applicable

Other Hazards Which Do Not Result in Classification: Not available

3. COMPOSITION INFORMATION / INGREDIENTS

Ingredient	CAS Number	EC Number	Percent
Polychlorotrifluoroethylene	9002-83-9	Not applicable	99-100%

No ingredients are hazardous according to OSHA criteria.

No components need to be disclosed according to the applicable regulations.

4. FIRST-AID MEASURES

Description of First Aid Measures:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Seek medical help.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical attention.

Skin Contact: Wash off with soap and plenty of water.

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

Most Important Symptoms and Effects, Both Acute and Delayed:

Potential Acute Health Effects:

Inhalation: None known

Ingestion: None known

Skin Contact: None known

Eye Contact: None known

Over-exposure signs/symptoms: From animal studies, signs of fluoride poisoning may be expected. These include nausea, shortness of breath and loss of appetite.

Inhalation: None known with respect to humans

Ingestion: None known with respect to humans

Skin Contact: None known with respect to humans

Eye Contact: None known with respect to humans

5. FIRE-FIGHTING MEASURES

Extinguishing Media:

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: No information available

Special Hazards Arising From the Substance or Mixture:

Hazards From the Substance or Mixture: No information available

Hazardous Thermal Decomposition Products: Thermal decomposition products are toxic and corrosive. See Section 10.

Advice for Fire-Fighters:

Special Precautions for Fire-Fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special Protective Equipment for Fire-Fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Avoid breathing vapors, mist or gas. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate

hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions: Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

Methods and Materials for Containment and Cleaning Up: Spills may be picked up with absorbent such as vermiculite and held in covered container for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not breathe dust, vapors or spray mist. Avoid contact with skin and eyes.

Conditions for Safe Storage, Including Any Incompatibilities: Protect against physical damage. Keep container tightly closed in a dry and well-ventilated place. Keep out of reach of children.

Specific End Uses: Laboratory chemicals, manufacture of substances

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits: No OSHA or ACGIH exposure limits have been established. Safe work practices should always be followed.

Ventilation System: Adequate general ventilation plus local exhaust at points of emission. Since the potential for human toxicity cannot be ruled out, proper ventilation and work practices should be employed.

Personal Respirators (NIOSH Approved): Under conditions of heavy exposure, respiratory protection is not normally required. Self contained breathing apparatus for large spills.

Skin Protection: Wear impervious gloves.

Eye Protection: Use chemical safety goggles or goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid, colorless

Odor: Slight ethereal odor

Odor Threshold: Not determined

pH: No data available

Melting Point: < 90C (194F)

Boiling Point / Boiling Range: ca 205C (401F)

Flash Point: None

Evaporation Rate (BuAC=1): No data available

Flammability: Not flammable

Upper / Lower Flammability or Explosive Limits: Not applicable

Vapor Pressure (mm Hg): ca 1 mm Hg at 21C (69.8F)

Vapor Density (Air=1): No data available

Relative Density: 1.8 @ 38C (100.4F)

Solubility: Negligible

Partition Coefficient: n-octanol / water: No data available

Auto-ignition Temperature: No data available

Decomposition Temperature: Rapidly at 325C, noticeable at 300C, safe operating temperature is 200C and maximum short term temperature is 260C in scrupulously clean systems

Viscosity: No data available

Explosive Properties: Not determined

Oxidizing Properties: Not determined

Other Information: No specific data

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to Avoid: Incompatibles

Incompatible Materials: 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 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.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: Oral LD50 (rat) - 1900 mg/kg (see below)

Potential Health Effects:

Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye Contact: No data available.

Chronic Exposure: No known effects.

Aggravation of Pre-existing Conditions: No known effects.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System): No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System): No data available.

Germ Cell Mutagenicity: No known effects.

Reproductive Toxicity: No known effects.

Aspiration Hazard: No known effects.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Polychlorotrifluoroethylene (9002-83-9)	No	No	None

Acute Toxicity: 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 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.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Results of PBT and vPvB assessment: PBT / vPvB assessment not available as chemical safety assessment not required / not conducted.

Other adverse effects: No data available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic): Not regulated

Maritime Transport IMDG/GGVSea: Not regulated

Air Transport ICAO-TI and IATA-DGR: Not regulated

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: No additional information

15. REGULATORY INFORMATION

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Polychlorotrifluoroethylene (9002-83-9)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Polychlorotrifluoroethylene (9002-83-9)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Polychlorotrifluoroethylene (9002-83-9)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Polychlorotrifluoroethylene (9002-83-9)	No	No	No

Chemical Weapons Convention: No		TSCA 12(b): No		CDTA: No	
SARA 311/312:	Acute: No	Chronic: No	Fire: No		Pressure: No
Reactivity: No		Pure / Liquid			

16. OTHER INFORMATION

Effective Date: July 18, 2017 – Added 1.8NG

Previous Revisions:

May 23, 2017 – Added 1.8HPT

June 17, 2016 – Added 1.8M

July 24, 2015 – added 2.25, corrected address, minor physical properties, formula

10/20/14 – Standardized for GHS / REACH, 02/06/07 – First Issue

05/27/14 – Product Name and Synonym updated – original product was Polychlorotrifluoroethylene

Disclaimer: Halocarbon believes the information given here to be correct. However, we cannot guarantee its accuracy or be responsible for loss or damage that result from the use of such information.