



HALOCARBON KF-SERIES OILS

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name Poly(oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)), alpha-(1,1,2,2,2-pentafluoroethyl)-omega-(tetrafluoro(trifluoromethyl)ethoxy)-

CAS No. 60164-51-4

Trade Name Halocarbon KFPA Oil, InfinX MRO KF102 Oil, InfinX MRO KF105 Oil, InfinX Halovac 140 Oil, InfinX Halovac 250 Oil, InfinX MRO KF106, InfinX MRO KF107 and InfinX MRO KF108

Product Code None

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s) Lubricants, Additives

Uses Advised Against Not available

Identity of manufacturer/importer and other suppliers

Company Identification Halocarbon, LLC
6525 The Corners Parkway; Suite 200
Peachtree Corners, GA 30092

Telephone (470) 419-6363

E-Mail (competent person) sds@halocarbon.com

Emergency telephone number

Emergency Phone No. CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) Not classified as dangerous for supply/use.

Label elements

Hazard Symbol None

Hazard Statement(s) None

Precautionary Statement(s) IF SWALLOWED: Rinse mouth. Treat symptomatically.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.
IF ON SKIN: Wash with plenty of soap and water. If irritation (redness, rash, blistering) develops, get medical attention.
Keep out of reach of children.

Other hazards

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	% wt.	CAS No.
Poly(oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)), alpha-(1,1,2,2,2-pentafluoroethyl)-omega-(tetrafluoro(trifluoromethyl)ethoxy)-	99-100	60164-51-4

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SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation	Not normally required. Move person to fresh air. If breathing is laboured, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation develops and persists, get medical attention.
Ingestion	Rinse mouth. Treat symptomatically.
Most important symptoms and effects, both acute and delayed	None known.
Indication of any immediate medical attention and special treatment needed	None known.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Non-combustible / Non-flammable. As appropriate for surrounding fire.
-Unsuitable Extinguishing Media	None anticipated.

Special hazards arising from the substance or mixture

Thermal decomposition products include hydrogen fluoride, carbonyl difluoride, carbon monoxide, and carbon dioxide.

Advice for fire-fighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective gloves/eye protection.

Environmental precautions

Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.

Reference to other sections

See Section: 8

Additional Information

None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes.

Hygiene Measures

Wash hands and exposed skin thoroughly after handling.

Environmental Exposure Controls

Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

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-Storage temperature Store at room temperature.
 -Incompatible materials None known.
Specific end use(s) Lubricants, Additives

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		STEL		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
None	-----	-----	-----	-----	-----	-----

Recommended monitoring method None known.

Exposure controls

Appropriate engineering controls Ensure adequate ventilation.

Personal protection equipment

Eye/face protection



Wear protective eyewear (goggles, face shield, or safety glasses).

Skin protection (Hand protection/ Other)



Wear suitable gloves (Nitrile rubber).

Respiratory protection



Normally no personal respiratory protection is necessary.

Environmental Exposure Controls

Disposal should be in accordance with local, state or national legislation.

Additional Information

None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colorless
Odor	Odorless
Odor Threshold (ppm)	Not available
pH (Value)	Neutral
Melting Point (°C) / Freezing Point (°C)	~-55 to -15 (~-67 to 5 °F)
Boiling point/boiling range (°C):	Not available
Flash Point (°C)	None
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Explosive Limit Ranges	Non-combustible / Non-flammable.

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Vapour pressure (Pascal)	Not available
Vapour Density (Air=1)	Not available
Density (g/ml)	~1.82 to 1.91 (~15.2 to 15.9 lbs/gal)
Solubility (Water)	Insoluble
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Not available
Decomposition Temperature (°C)	350 (662 °F)
Kinematic Viscosity (cSt)	~17 to 800 @ 40 °C
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Not available
Chemical stability	Considered stable under normal conditions.
Possibility of hazardous reactions	None known.
Conditions to avoid:	None known.
Incompatible materials	None known.
Hazardous decomposition product(s)	Thermal decomposition products include hydrogen fluoride, carbonyl difluoride, carbon monoxide, and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation, Skin Contact, Eye Contact

Acute toxicity	Oral: LD50 >11 g/kg-bw Dermal: LD50 >17 g/kg-bw
Irritation/Corrosivity	Not to be expected
Sensitization	It is not a skin sensitizer.
Repeated dose toxicity	Not to be expected
Carcinogenicity	No data. It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity	There is no evidence of mutagenic potential.
Reproductive toxicity	Not to be expected

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	
Acute toxicity (estimated / calculated)	LC50(96 hour): >1000 mg/l (fish) EC50(48 hour): >100 mg/l (Daphnia magna) EC50 (72 hour): >1000 mg/l (algae)
Long Term Toxicity	Not to be expected
Persistence and degradability	Persistent
Bioaccumulative potential	The substance has low potential for bioaccumulation.
Mobility in soil	No data.



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Results of PBT and vPvB assessment
Other adverse effects

Not classified as PBT or vPvB.
None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, any by-products and containers should be in accordance with local, state, and national regulation, at an approved waste-handling facility. Do not release into drains, sewers, soil, or any body of water. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number			
Proper Shipping Name		Not classified as dangerous for transport.	
Transport hazard class(es)			
Packing group			
Environmental hazards			
Special precautions for user			
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable			

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All substances listed and active.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories: See SECTION 2 - HAZARDS IDENTIFICATION

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 5, 13.



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Additional Information: None

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