

**Krytox® PFPE Oils**

Version 2.5

Revision Date 08/19/2011

Ref. 15000000934

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Krytox® PFPE Oils
Product Grade/Type : GPL: 100, 101, 102, 103, 104, 105, 106, 107, 107-500
VPF: 1506, 1514, 1520, 1525, 1525S, 1531, 1531E, 1618, 1645, 16256,
16350
CBF: 100A, 100B, 103B
GBO: 14, 25
XHT- : 500, 750, 1000
FG: 10, 12, 15, 40, 45
AUT 1045
4442, 4402, TFO, TLC, NBF140
TLF 8996
KDP-4885

MSDS Number : 15000000934

Product Use : Lubricant

Manufacturer : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

Other information : professional use

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

The product as such is not hazardous. Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath.

Potential Health Effects

Skin

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Perfluoropolyether : May cause skin irritation.
May cause: Discomfort, itching, redness, or swelling.

Eyes
Perfluoropolyether : May cause eye irritation.
May cause: Tearing, redness, or discomfort.

Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No. | Concentration |
|--------------------|---------|---------------|
| Perfluoropolyether | | 100 % |

SECTION 4. FIRST AID MEASURES

Skin contact : Wash with water and soap as a precaution.

Eye contact : Rinse with plenty of water. If eye irritation persists, consult a specialist.

Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.

Ingestion : Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

General advice : When symptoms persist or in all cases of doubt seek medical advice.

SECTION 5. FIREFIGHTING MEASURES

Flammable Properties

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| | |
|------------------------------|--|
| Flash point | : Method : Pensky-Martens closed cup - PMCC does not flash |
| Thermal decomposition | : ca. 350 °C (662 °F) |
| Fire and Explosion Hazard | : In fire conditions, toxic decomposition products may be formed. (see also section 10) |
| Suitable extinguishing media | : The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Firefighting Instructions | : Wear self-contained breathing apparatus (SCBA). Wear suitable protective equipment. Standard procedure for chemical fires. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

| | |
|-----------------------------|--|
| Spill Cleanup | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). |
| Accidental Release Measures | : Prevent material from entering sewers, waterways, or low areas. |

SECTION 7. HANDLING AND STORAGE

| | |
|----------------------|--|
| Handling (Personnel) | : Avoid breathing vapors from overheated material. General industrial hygiene practice. |
| Storage | : No special storage conditions required. Keep container closed to prevent contamination. No decomposition if stored and applied as directed. |

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : In the event that the polymer is heated above 350 °C (662 °F), local ventilation should be used to avoid exposure to fumes.
- Personal protective equipment
- Respiratory protection : No personal respiratory protective equipment normally required. In the case of hazardous fumes caused by overheating, wear self-contained breathing apparatus.
- Hand protection : Additional protection: No particular glove type is recommended, but nitrile may be used.
- Eye protection : Safety glasses
- Skin and body protection : No PPE is specified however, avoid contact with skin, eyes, and clothing. Preventive skin protection
- Exposure Guidelines
Exposure Limit Values

None established.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : viscous, liquid
- Color : colourless
- Odor : none
- pH : neutral
- Pour point : -55 - -15 °C (-67 - 5 °F)
- Specific gravity : ca. 1.86 - 1.91 at 24 °C (75 °F)
- Water solubility : insoluble

SECTION 10. STABILITY AND REACTIVITY

- Stability : Stable under recommended storage conditions.

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Conditions to avoid : Decomposition temperature 350 °C (662 °F)

Hazardous decomposition products : Hazardous thermal decomposition products:
Fluorinated compounds**SECTION 11. TOXICOLOGICAL INFORMATION**

Perfluoropolyether

- Dermal ALD : ca. > 17,000 mg/kg , rabbit
- Oral LD50 : > 37,400 mg/kg , rat
- Inhalation 4 h ALC : ca. > 19.54 mg/l , rat
- Skin irritation : slight irritation, rabbit
- Eye irritation : slight irritation, rabbit
- Skin sensitization : Patch test on human volunteers did not demonstrate sensitization properties., human
- Mutagenicity : Did not cause genetic damage in cultured bacterial cells.
- Further information : The substance is a polymer and is not expected to produce toxic effects.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Perfluoropolyether

- 96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 1,000 mg/l
The substance is a polymer and is not expected to produce toxic effects.
- 48 h EC50 : Daphnia magna (Water flea) > 1,000 mg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : In accordance with local and national regulations.



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Environmental Hazards : Dispose of container properly.
If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA Status : On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

Restrictions for use : Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

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Contact person : MSDS Coordinator, DuPont Chemicals and Fluoroproducts, Wilmington, DE
19898, (800) 441-7515

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The



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information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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