

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

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 : DuPont™ 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  
Krytox ESP 250C  
Krytox SKY188  
Zonyl 1045

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.

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

**Potential Health Effects****Skin**

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

**Eyes**

Perfluoroalkylether : 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
Perfluoroalkylether	60164-51-4	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.

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

**SECTION 5. FIREFIGHTING MEASURES**

## Flammable Properties

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.

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

Storage : No special storage conditions required. Keep container closed to prevent contamination.  
No decomposition if stored and applied as directed.

**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 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

Contains no substances with occupational exposure limit values.

None established.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : viscous, liquid  
Color : colourless  
Odor : none  
pH : neutral  
pour point : < -5 °C (23 °F)  
Specific gravity : ca. 1.86 - 1.91 at 24 °C (75 °F)  
Water solubility : insoluble

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

**SECTION 10. STABILITY AND REACTIVITY**

Stability	: Stable under recommended storage conditions.
Conditions to avoid	: Decomposition temperature 350 °C (662 °F)
Hazardous decomposition products	: Hazardous thermal decomposition products: Fluorinated compounds

**SECTION 11. TOXICOLOGICAL INFORMATION**

## Perfluoroalkylether

Dermal ALD - Approximate Lethal Dose	: ca. > 17,000 mg/kg , rabbit
Oral LD50	: > 37,400 mg/kg , rat
Inhalation 4 h ALC - Approximate Lethal Concentration	: 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 sensitisation 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  
Perfluoroalkylether

**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

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.

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 : On the inventory, or in compliance with the inventory

**SECTION 16. OTHER INFORMATION**

	HMIS
Health	: 1
Flammability	: 0
Reactivity/Physical hazard	: 0
PPE	: Personal Protection rating to be supplied by user depending on use



**DuPont™ Krytox® PFPE Oils**

Version 4.1

Revision Date 07/09/2013

Ref. 15000000934

conditions.

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.

Krytox® and The DuPont Oval Logo® are trademarks of E. I. du Pont de Nemours and Company

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 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.

Significant change from previous version is denoted with a double bar.