

**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 150000003225

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<sup>®</sup> 283 Series Greases  
Product Grade/Type : 283: AA, AB, AC, AD, AZ  
MSDS Number : 150000003225  
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 thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Repeated episodes of polymer fume fever may result in persistent lung effects.

## Potential Health Effects

Skin : May cause: slight irritation, Redness.

Eyes : May cause eye irritation. Discomfort, tearing, Blurred vision.

## 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.

**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component          | CAS-No.   | Concentration |
|--------------------|-----------|---------------|
| Perfluoropolyether |           | 70 - 75 %     |
| PTFE               |           | 20 - 25 %     |
| Sodium nitrite     | 7632-00-0 | 1 - 5 %       |

**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. FIRE-FIGHTING MEASURES**

- Flammable Properties
- Flash point : does not flash
- Thermal decomposition : 300 °C (572 °F)
- Fire and Explosion Hazard : In fire conditions, toxic decomposition products may be formed. (see also section 10)



**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

- 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 : Shovel into suitable container for disposal.
- 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. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this 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.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Engineering controls : In the event that the polymer is heated above 300°C (572 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.

**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

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  
None established.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : grease  
Color : white  
Odor : none  
pH : neutral  
Melting point : 320 °C (608 °F)  
Specific Gravity : 1.89 - 1.93 at 24 °C (75 °F)

**SECTION 10. STABILITY AND REACTIVITY**

Stability : Stable under recommended storage conditions.

Conditions to avoid : Decomposition temperature 300 °C (572 °F)

Hazardous decomposition products : Hazardous thermal decomposition products: Fluorinated compounds

**SECTION 11. TOXICOLOGICAL INFORMATION**

Krytox<sup>®</sup> 283 Series Greases

Oral ALD : > 11,000 mg/kg , rat

Oral LD50 : > 5,000 mg/kg , rat

Skin irritation : slight irritation, rabbit

Eye irritation : slight irritation, rabbit

Sensitisation : Animal test did not cause sensitization by skin contact., guinea pig



## Krytox<sup>®</sup> 283 Series Greases

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

|                                    |   |  |
|------------------------------------|---|--|
| Further information                | : | The toxicological data has been taken from products of similar composition.  |
| Perfluoropolyether<br>Mutagenicity | : | Did not cause genetic damage in cultured bacterial cells.  |
| Sodium nitrite<br>Mutagenicity     | : | Experiments showed mutagenic effects in cultured bacterial cells.<br>Tests on mammalian cell cultures showed mutagenic effects.<br>Caused genetic damage in animals.   |
| Teratogenicity                     | : | Animal testing showed effects on embryo-foetal development at levels below those causing maternal toxicity.<br>Has been reported to cause:<br>Reduced embryo-foetal viability<br>Reduced growth<br>Active ingredient |

### SECTION 12. ECOLOGICAL INFORMATION

|  |   |  |
|--|---|--|
| Aquatic Toxicity<br>Perfluoropolyether<br>96 h LC50                              | : | Oncorhynchus mykiss (rainbow trout) > 1,000 mg/l<br>The substance is a polymer and is not expected to produce toxic effects. |
| 48 h EC50  | : | Daphnia magna (Water flea) > 1,000 mg/l  |
| PTFE   | : | The substance is a polymer and is not expected to produce toxic effects.   |
| Sodium nitrite<br>96 h LC50  | : | Oncorhynchus mykiss (rainbow trout) 0.54 mg/l  |
| Environmental Fate<br>Krytox <sup>®</sup> 283 Series Greases<br>Biodegradability | : | Not readily biodegradable.   |
| Additional ecological information  | : | No data is available on the product itself.  |



**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

**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 Status : On the inventory, or in compliance with the inventory
- SARA 313 Regulated Chemical(s) : Sodium nitrite
- CERCLA Reportable Quantity : 2,000 lbs  
Based on the percentage composition of this chemical in the product.:  
Sodium nitrite

**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.

Krytox<sup>®</sup> and The DuPont Oval Logo<sup>®</sup> 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



**Krytox<sup>®</sup> 283 Series Greases**

Version 2.3

Revision Date 04/23/2010

Ref. 15000003225

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.