

**DuPont™ Krytox® PFPE-Boron Nitride Greases**

Version 0.0

Revision Date 04/03/2015

Ref. 150000000935

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-Boron Nitride Greases
Product Grade/Type	:	XHT-BD XHT-BDX XHT-BDZ NRT 8950, NRT 8980
Product Use	:	Lubricant, For industrial use only.
Restrictions on use	:	Do not use product for anything outside of the above specified uses
Manufacturer/Supplier	:	Ratermann Manufacturing, Inc. 601 Pinnacle Place Livermore, CA 94550 United States of America
Product Information	:	1-800-264-7793
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**

Not classified as a hazardous substance or mixture according to the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard 2012.

**Other hazards**

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

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

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Component	CAS-No.	Concentration
Diboron trioxide	1303-86-2	0.1 %

**SECTION 4. FIRST AID MEASURES**

- General advice : When symptoms persist or in all cases of doubt seek medical advice.
- Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.
- Skin contact : Wash with water and soap as a precaution.
- Eye contact : Rinse with plenty of water. If eye irritation persists, consult a specialist.
- 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.
- Most important symptoms/effects, acute and delayed : No applicable data available.
- Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.
- Notes to physician : No applicable data available.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No applicable data available.
- Specific hazards : In fire conditions, toxic decomposition products may be formed. (see also section 10)

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Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further information : 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.

Safeguards (Personnel) : No applicable data available.

Environmental precautions : Prevent material from entering sewers, waterways, or low areas.

Spill Cleanup : Shovel into suitable container for disposal.

Accidental Release Measures : No applicable data available.

**SECTION 7. HANDLING AND STORAGE**

Handling (Personnel) : Avoid breathing vapors from overheated material.  
General industrial hygiene practice.

Handling (Physical Aspects) : No applicable data available.

Dust explosion class : No applicable data available.

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

Storage period : No applicable data available.

Storage temperature : No applicable data available.

**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

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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

This product does not contain any exposure limits that require disclosure according to OSHA Hazard Communication Standard 2012.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance

Physical state : solid  
Form : solid  
Color : white

Odor : none

Odor threshold : No applicable data available.

pH : neutral

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : does not flash

Evaporation rate : No applicable data available.

Flammability (solid, gas) : No applicable data available.

Upper explosion limit : No applicable data available.

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Lower explosion limit	: No applicable data available.
Vapour Pressure	: No applicable data available.
Vapour density	: No applicable data available.
Specific gravity (Relative density)	: 1.9 at 24 °C (75 °F)
Water solubility	: insoluble
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: No applicable data available.
Decomposition temperature	: 350 °C
Viscosity, kinematic	: No applicable data available.
Viscosity	: No applicable data available.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No applicable data available.
Conditions to avoid	: Decomposition temperature > 350 °C (> 662 °F)
Incompatible materials	: No applicable data available.
Hazardous decomposition products	: Hazardous thermal decomposition products: Fluorinated compounds

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**SECTION 11. TOXICOLOGICAL INFORMATION**

Diboron trioxide

- Dermal LD50 : > 2,000 mg/kg , Rabbit  
Information given is based on data obtained from similar substances.
- Oral LD50 : > 2,600 mg/kg , Rat  
Target Organs: Central nervous system  
Central nervous system effects
- Skin irritation : No skin irritation, Rabbit  
Information given is based on data obtained from similar substances.
- Eye irritation : Eye irritation, Rabbit  
Information given is based on data obtained from similar substances.
- Skin sensitization : Does not cause skin sensitisation., Guinea pig  
Information given is based on data obtained from similar substances.
- Repeated dose toxicity : Oral  
Rat  
-  
NOAEL: 100 mg/kg  
LOAEL: 334 mg/kg Method: OECD Test Guideline 408  
Target Organs: Reproductive organs  
The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.  
Testicular effects, Information given is based on data obtained from similar substances.
- Carcinogenicity : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.
- Mutagenicity : Animal testing did not show any mutagenic effects.  
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Information given is based on data obtained from similar substances.
- Reproductive toxicity : Presumed human reproductive toxicant  
Reduced fertility  
Information given is based on data obtained from similar substances.
- Teratogenicity : Animal testing showed effects on embryo-foetal development



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including:  
 Reduced growth  
 Foetal malformations  
 Information given is based on data obtained from similar substances.

### Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

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 12. ECOLOGICAL INFORMATION

### Aquatic Toxicity

#### Diboron trioxide

96 h LC50	:	Fish 74 mg/l Information given is based on data obtained from similar substances.
ErC50	:	
10 d NOEC	:	Algae 10 mg/l Information given is based on data obtained from similar substances.
48 h EC50	:	Daphnia magna (Water flea) 133 mg/l Information given is based on data obtained from similar substances.
32 d	:	NOEC Pimephales promelas (fathead minnow) 11.2 mg/l US EPA Test Guideline OPPTS 850.1400 Information given is based on data obtained from similar substances.
21 d	:	NOEC Daphnia magna (Water flea) 10 mg/l OECD Test Guideline 211 Information given is based on data obtained from similar substances.

## SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - : In accordance with local and national regulations.



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Product

Contaminated packaging : 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**

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 and DuPont CAUTION Regarding Medical Applications.

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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,





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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.

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