



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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"Krytox" TM7
10716PP Revised 3-AUG-2001

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Tradenames and Synonyms

"Krytox"
"Krytox" TM7s
KDP-4429
KDP-4473

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

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

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Perfluoroalkylether	60164-51-4	60-85
PTFE	9002-84-0	0-25
Boron Nitride	10043-11-5	0-25
NJ Trade Secret Registry # 00850201001-5620P		0-10

HAZARDS IDENTIFICATION

Potential Health Effects

Skin contact may cause reddening of the skin. Perfluoro-alkylether was not a skin irritant or a skin sensitizer in a 100 person human patch test.

Eye contact may cause eye irritation with discomfort, tearing or blurring of vision.

Inhalation of fluorine containing compounds released as decomposition products from overheated or burning product may cause lung irritation and pulmonary edema which require medical treatment. Inhalation of gases and fumes from

(HAZARDS IDENTIFICATION - Continued)

overheated or burning product may cause polymer fume fever, which is a temporary flu-like illness characterized by fever, chills, and sometimes cough, and lasting approximately 24 hours. Repeated episodes of polymer fume fever may cause persistent lung effects.

Carcinogenicity Information

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

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

Flush skin with water after contact. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be administered. To prepare activated charcoal mixture, suspend 50 grams activated charcoal in 400 mL water and mix thoroughly. Administer 5 mL/kg, or 350 mL for an average adult.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : None
Method : TCC

Non-combustible

Extinguishing Media

As appropriate for combustibles in area

Fire Fighting Instructions

Wear self-contained breathing apparatus. Wear full protective equipment.

Decomposition at flame temperatures may form toxic fluorine compounds. Avoid breathing decomposition products.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Accidental Release Measures

Place in container for disposal. Remove source of heat and flame.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes. Avoid contact with skin. Wash thoroughly after handling. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Storage

Keep container tightly closed. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Keep away from heat and flames to avoid decomposition product.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Keep container tightly closed.

Keep away from heat and flames. Use ventilation when the oil is heated above 550 degF.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses or coverall chemical splash goggles.

RESPIRATORS

Wear NIOSH approved respiratory protection, as appropriate.

PROTECTIVE CLOTHING

Where there is potential for skin contact have available and wear as appropriate impervious gloves, apron, pants, and jacket.

Exposure Guidelines

Applicable Exposure Limits

PTFE

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (DuPont)	: 10 mg/m ³ , 8 Hr. TWA, total dust 5 mg/m ³ , 8 Hr. TWA, respirable dust

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

pH	: Neutral
Odor	: None
Form	: Grease
Color	: White
Specific Gravity	: 1.9

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Heating above 350 degC (662 degF) may form potentially toxic fluorine compounds. Depolymerization may occur in the presence of some metal oxides at temperatures above 288 degC (550 degF). Decomposition occurs at increasing rates as temperature is raised above 355 degC (670 degF).

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Perfluoroalkylether:

Inhalation 4 hour ALC: >19.54 mg/L in rats
Skin Absorption ALD: >17,000 mg/kg in rats
Oral ALD: >25,000 mg/kg in rats

Boron Nitride:

Oral LD50: >2,000 mg/kg in rabbits

Perfluoroalkylether is a mild skin and eye irritant, but is not a skin sensitizer in tests on animals. A single inhalation exposure to perfluoroalkylether caused nonspecific effects such as respiratory irritation. Exposure to thermal decomposition products produced irritation, irregular respiration, tremors, and increased liver weight. Repeated inhalation exposures to 10, 100, or 1000 mg/m³ caused increased lung weights and microscopic particle-laden macrophages in the lungs and lymph nodes; this was an expected pulmonary response to high aerosol concentrations of an inert material. No animal test reports are available to define carcinogenic, developmental, or reproductive hazards. Tests have shown that the product did not cause genetic damage in bacterial cell cultures.

A single exposure to PTFE by inhalation caused irritation of the lungs. Repeated ingestion exposure caused no significant toxicological effects. Long-term exposure

(TOXICOLOGICAL INFORMATION - Continued)

caused altered white blood cell count.

Boron Nitride is untested for skin and eye irritancy, and is untested for animal sensitization. A single inhalation exposure in rats and mice produced no silicosis-like changes in the lungs. The effects in animals from acute, subchronic, or chronic exposure by ingestion or skin contact have not been determined. No animal test reports are available to define carcinogenic, mutagenic, developmental or reproductive hazards.

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO/IATA
Proper Shipping Name : Not Regulated

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : Listed.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : No
Fire : No
Reactivity : No
Pressure : No

OTHER INFORMATION

NFPA, NPCA-HMIS

NPCA-HMIS Rating
Health : 1
Flammability : 0
Reactivity : 0

