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## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Dupont Krytox RFE PFPE Lubrica  
**ISSUED:** 04/15/2009  
**REVISION NUMBER:** 002.1  
**EMERGENCY PHONE:** 860.571.5100  
**Web Site:** www.henkelna.com  
**MSDS Manufacturer Number:** 234339  
**PHONE INFO:** 860.571.5100  
**Region:** United States  
**Item number:** 29710  
**ADDRESS:** Henkel Corporation 1001 Trout Brook Crossing Rocky Hill, Connecticut 06067  
**Product Information:** Lubricant  
**TRADE NAME:** Dupont® Krytox® RFE PFPE Lubrica

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS#	Ingredient Percent
Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-	60164-51-4	60 - 100 by Weight
Ethene, tetrafluoro-, homopolymer	9002-84-0	10 - 30 by Weight

## SECTION 3 - HAZARDS IDENTIFICATION

**COLOR:** White  
**ODOR:** Odorless  
**PHYSICAL STATE:** Solid, waxy, grease  
**ROUTES OF ENTRY:** Skin, Inhalation, Eyes  
**EMERGENCY OVERVIEW:** CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.  
**INGESTION:** Not expected under normal conditions of use.  
**AGGRAVATION OF CONDITIONS:** None known  
**Hazards Comments:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). See Section 11 for additional toxicological information.  
**EYE CONTACT:** Contact with eyes will cause irritation. Blurred vision. Excess tearing.  
**SKIN CONTACT:** May cause skin irritation with discomfort or rash. Prolonged skin contact may cause redness and inflammation of the hair follicles without skin sensitization.  
**INHALATION:** Inhalation of Fluorine containing compounds released as decomposition products above 290 deg C, (554 deg F) may cause lung irritation and pulmonary edema which require medical attention. Inhalation of fumes or smoke from overheating or burning may cause polymer fume fever, a temporary flu-like illness accompanied by fever, chills, and sometimes coughing. These symptoms generally last approximately 24 hours. Repeated episodes of polymer fume fever may cause lung damage.

## SECTION 4 - FIRST AID MEASURES

**NOTE TO PHYSICIANS:** If ingested, irrigate the stomach using activated charcoal in addition. Note: to prepare activated charcoal slurry, mix thoroughly 50 g of activated charcoal in 400 ml (about 2 cups) water. Administer 5mg/kg, or 350 ml for an average adult.  
**INGESTION:** Do not induce vomiting. Immediately give large quantities of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.  
**EYE CONTACT:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**SKIN CONTACT:** Remove contaminated clothing and footwear. Immediately flush skin with plenty of water (using soap, if available). If skin irritation persists, call a physician. Wash clothing before reuse.  
**INHALATION:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## SECTION 5 - FIRE FIGHTING MEASURES

**AUTOIGNITION TEMPERATURE:** Not available  
**FLASH POINT:** Does not ignite.  
**HAZARDOUS COMBUSTION PRODUCTS:** Toxic fluorine compounds.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Not available  
**EXTINGUISHING MEDIA:** Will not burn. Use media appropriate for surrounding material.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.  
**FLAMMABLE LIMITS - LEL:** Not available  
**FLAMMABLE LIMITS - UEL:** Not available

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

<b>Spill Notes:</b>	Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.
<b>SPILL CLEAN UP MEASURES:</b>	Remove all sources of ignition.
<b>ENVIRONMENTAL DATA:</b>	Do not flush with water. Do not allow product to enter sewer or waterways.

#### SECTION 7 - HANDLING and STORAGE

<b>Handling Notes:</b>	For information on product shelf life contact Henkel Customer Service at (800) 243-4874.
<b>HANDLING:</b>	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not store or consume food, drink, or tobacco products in areas where they may become contaminated with this material.
<b>STORAGE:</b>	Keep container closed. Keep away from heat and flames to avoid decomposition products.

#### SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

<b>Ingredient Guideline Notes:</b>	Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.
<b>EYE PROTECTION:</b>	Safety goggles or safety glasses with side shields.
<b>SKIN PROTECTION:</b>	Chemical resistant, impermeable gloves.
<b>RESPIRATORY PROTECTION:</b>	Where the potential exists for exposure to decomposition products due to heating or elevated temperatures, wear NIOSH approved respiratory protection as appropriate.
<b>ENGINEERING CONTROLS:</b>	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
<b>Ingredient:</b>	Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], .alpha.-(pentafluoroethyl)-.omega.[tetrafluoro(trifluoromethyl)ethoxy]
<b>ACGIH TLV - TWA:</b>	None
<b>OSHA PEL (TWA):</b>	None
<b>AIHA WEEL:</b>	None
<b>OTHER:</b>	None
<b>Ingredient:</b>	Ethene, tetrafluoro-, homopolymer
<b>ACGIH TLV - TWA:</b>	None
<b>OSHA PEL (TWA):</b>	None
<b>AIHA WEEL:</b>	None
<b>OTHER:</b>	10 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.

#### SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	Solid, waxy, grease
<b>COLOR:</b>	White
<b>ODOR:</b>	Odorless
<b>VAPOR PRESSURE:</b>	0.0000001 mm hg (20 deg C (68 deg F))
<b>pH:</b>	Neutral
<b>BOILING POINT:</b>	Not available
<b>MELTING POINT:</b>	320 deg C (608 deg F)
<b>SPECIFIC GRAVITY:</b>	1.89 - 1.93
<b>VAPOR DENSITY:</b>	Not available
<b>EVAPORATION RATE:</b>	Not available
<b>SOLUBILITY IN WATER:</b>	Negligible
<b>Kow - Oct/Water partition coef:</b>	Not available
<b>VOLATILE ORGANIC COMPOUNDS:</b>	Essentially Zero (Exempt Compounds)
<b>ODOR THRESHOLD:</b>	Not available
<b>Flash Point:</b>	Does not ignite.
<b>Flammable Limits - LEL:</b>	Not available
<b>Flammable Limits - UEL:</b>	Not available
<b>Autoignition temperature:</b>	Not available

#### SECTION 10 - STABILITY and REACTIVITY

<b>DANGEROUS REACTIONS:</b>	Will not occur.
<b>STABILITY:</b>	Stable
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Heating above 260-290 deg C (500-554 deg F) may form potentially toxic fluorine compounds.
<b>INCOMPATIBLE MATERIALS:</b>	Not available
<b>CONDITIONS TO AVOID:</b>	Avoid heating above temperatures of 260-290 deg C (500-554 deg F). Depolymerization may occur in the presence of some metal oxides above 288 deg C (550 deg F). Decomposition occurs at increasing rates as temperature is raised above 355 deg C (670 deg F).

#### SECTION 11 - TOXICOLOGICAL INFORMATION

<b>Health Effects/Target Organs:</b>	No Target Organs
<b>Health Effects/Target Organs:</b>	No Records
<b>Chemical Name:</b>	Ethene, tetrafluoro-, homopolymer
<b>Chemical Name:</b>	Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], .alpha.-(pentafluoroethyl)-.omega.[tetrafluoro(trifluoromethyl)ethoxy]
<b>OSHA:</b>	No
<b>IARC:</b>	No
<b>NTP:</b>	No
<b>Chemical Name:</b>	Ethene, tetrafluoro-, homopolymer
<b>OSHA:</b>	No
<b>IARC:</b>	No
<b>NTP:</b>	No
<b>Chemical Name:</b>	Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-

<b>Toxicological Information:</b>	A single inhalation exposure to PTFE caused irritation of the lungs. A repeated ingestion exposure caused no significant toxicological effects. Long term ingestion exposure altered white blood cell counts.
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## SECTION 12 - ECOLOGICAL INFORMATION

<b>ECOTOXICOLOGICAL INFORMATION:</b>	Not available
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## SECTION 13 - DISPOSAL CONSIDERATIONS

<b>Disposal Notes:</b>	Information provided is for unused product only.
<b>EPA Hazardous Waste Number (RCRA):</b>	Not a RCRA hazardous waste.
<b>WASTE DISPOSAL:</b>	Dispose of according to Federal, State and local governmental regulations. Do not allow product to enter sewer or waterways.

## SECTION 14 - TRANSPORT INFORMATION

<b>IMDG Class:</b>	None
<b>IMDG UN Number:</b>	None
<b>IMDG Packing group:</b>	None
<b>IMDG Proper shipping name:</b>	Not regulated
<b>IATA Packing group:</b>	None
<b>IATA UN Number:</b>	None
<b>IATA Class:</b>	None
<b>IATA Proper shipping name:</b>	Not regulated
<b>DOT Hazard class:</b>	None
<b>DOT Identification number:</b>	None
<b>DOT Packing group:</b>	None
<b>DOT Proper shipping name:</b>	Not regulated

## SECTION 15 - REGULATORY INFORMATION

<b>WHMIS:</b>	D.2.B
<b>DSL/NDSL:</b>	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
<b>SECTION 302 EHS:</b>	None above reporting de minimus
<b>311/312 Hazard Categories:</b>	Immediate Health
<b>SECTION 313:</b>	None above reporting de minimus
<b>California Proposition 65:</b>	No California Proposition 65 listed chemicals are known to be present.
<b>TSCA EXPORT NOTIFICATION:</b>	None above reporting de minimus
<b>TSCA INVENTORY STATUS:</b>	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

## SECTION 16 - ADDITIONAL INFORMATION

<b>HMIS - HEALTH:</b>	1
<b>HMIS - FLAMMABILITY:</b>	0
<b>HMIS - REACTIVITY:</b>	1
<b>HMIS - PERSONAL PROTECTION:</b>	See MSDS Section 8
<b>COMMENTS:</b>	This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.
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