Revision Number: 002.1

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Dupont® Krytox® RFE PFPE Lubricant
Product type: Lubricant

IDH number: 234339
Item number: 29710
Region: United States

Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Contact information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HMIS:

Physical state: Solid, waxy, grease
Color: White
Odor: Odorless

HEALTH: 1
FLAMMABILITY: 0
PHYSICAL HAZARD: 1
Personal Protection: See MSDS Section 8

CAUTION: MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

Inhalation: Inhalation of Fluorine containing compounds released as decomposition products above 290°C, (554°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.

Skin contact: May cause skin irritation with discomfort or rash. Prolonged skin contact may cause redness and inflamation of the hair follicles without skin sensitization.

Eye contact: Contact with eyes will cause irritation. Blurred vision. Excess tearing.

Ingestion: Not expected under normal conditions of use.

Existing conditions aggravated by exposure: None known

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-	60164-51-4	60 - 100
Ethene, tetrafluoro-, homopolymer	9002-84-0	10 - 30

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

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.
Eye contact:	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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.
Notes to physician:	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.

5. FIRE FIGHTING MEASURES

Flash point:	Does not ignite.
Autoignition temperature:	Not available
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Extinguishing media:	Will not burn. Use media appropriate for surrounding material.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Not available
Hazardous combustion products:	Toxic fluorine compounds.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not flush with water. Do not allow product to enter sewer or waterways.
Clean-up methods:	Remove all sources of ignition.

7. HANDLING AND STORAGE

Handling:	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.
Storage:	Keep container closed. Keep away from heat and flames to avoid decomposition products.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

Hazardous components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-	None	None	None	None
Ethene, tetrafluoro-, homopolymer	None	None	None	10 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.

Engineering controls: Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

Respiratory protection: Where the potential exists for exposure to decomposition products due to heating or elevated temperatures, wear NIOSH approved respiratory protection as appropriate.

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Chemical resistant, impermeable gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid, waxy, grease
Color: White
Odor: Odorless
Odor threshold: Not available
pH: Neutral
Vapor pressure: 0.0000001 mm hg (20 °C (68°F))
Boiling point/range: Not available
Melting point/ range: 320 °C (608°F)
Specific gravity: 1.89 - 1.93
Vapor density: Not available
Flash point: Does not ignite.
Flammable/Explosive limits - lower: Not available
Flammable/Explosive limits - upper: Not available
Autoignition temperature: Not available
Evaporation rate: Not available
Solubility in water: Negligible
Partition coefficient (n-octanol/water): Not available
VOC content: Essentially Zero (Exempt Compounds)

10. STABILITY AND REACTIVITY

Stability: Stable

Hazardous reactions: Will not occur.

Hazardous decomposition products: Heating above 260-290°C (500-554°F) may form potentially toxic fluorine compounds.

Incompatible materials: Not available

Conditions to avoid: Avoid heating above temperatures of 260-290°C (500-554°F). Depolymerization may occur in the presence of some metal oxides above 288°C (550°F). Decomposition occurs at increasing rates as temperature is raised above 355°C (670°F).

11. TOXICOLOGICAL INFORMATION

Product toxicity data: 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.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-	No	No	No
Ethene, tetrafluoro-, homopolymer	No	No	No

Hazardous components	Health Effects/Target Organs
Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.-(pentafluoroethyl)-.omega.-[tetrafluoro(trifluoromethyl)ethoxy]-	No Records
Ethene, tetrafluoro-, homopolymer	No Target Organs

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations. Do not allow product to enter sewer or waterways.

Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12(b) Export Notification: None above reporting de minimus

CERCLA/SARA Section 302 EHS: None above reporting de minimus
CERCLA/SARA Section 311/312: Immediate Health
CERCLA/SARA 313: None above reporting de minimus

California Proposition 65: No California Proposition 65 listed chemicals are known to be present.

Canada Regulatory Information

CEPA DSL/NDSL Status:	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
WHMIS hazard class:	D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

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