



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: P55/R Lubricant, Red
MANUFACTURER: 3M
DIVISION: Electrical Markets Division
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 10/19/09

Supersedes Date: 12/08/08

Document Group: 06-4861-8

Product Use:

Intended Use: Electrical
Intended Use: ELECTRICAL LUBRICATING GREASE

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
1,1,2,3,3,3-HEXAFLUORO-1-PROPENE, OXIDIZED, POLYMD.	69991-67-9	95 - 98
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FRBE	112945-52-5	<= 5
C.I. PIGMENT RED 170	2786-76-7	<= 0.05

This product complies with Directive 2002/95/EC of the European Parliament on the Restriction of Hazardous Substances (RoHS)

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: ODORLESS, RED COLOR, GREASE

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Contact with aluminum or zinc in a pressurized system may generate hydrogen gas which could create an explosion hazard.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

Inhalation:

During heating:

Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

If thermal decomposition occurs:

May be harmful if inhaled.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point
Flammable Limits - LEL

Not Applicable
Not Applicable

Flammable Limits - UEL

Not Applicable

5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam). Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Water may be used to blanket the fire. See Hazardous Decomposition section for products of combustion. Nonflammable. When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable. Contact with aluminum or zinc in a pressurized system may generate hydrogen gas which could create an explosion hazard. No unusual effects are anticipated during fire extinguishing operations. Avoid breathing the products and substances that may result from the thermal decomposition of the product or the other substances in the fire zone. Keep containers cool with water spray when exposed to fire to avoid rupture.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures:

Dispose of collected material as soon as possible.

Observe precautions from other sections. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Collect as much of the spilled material as possible. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from aluminum and zinc. Avoid breathing of vapors, mists or spray. Avoid skin contact with hot material. Avoid eye contact with vapors, mists, or spray. For industrial use only. Not intended for use as a medical device or drug. For industrial or professional use only. Do not mix with oxidizers to avoid risk of explosion.

7.2 STORAGE

Store away from acids. Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust when product is heated.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

8.2.2 Skin Protection

Avoid skin contact with hot material.

None required.

8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

None Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:

Paste

Odor, Color, Grade:

ODORLESS, RED COLOR, GREASE

General Physical Form:

Liquid

Flash Point

Not Applicable

Flammable Limits - LEL

Not Applicable

Flammable Limits - UEL

Not Applicable

Boiling point

270 °C [Detail: MITS data (per supplier info)]

Vapor Pressure

<=0.01 mmHg

Specific Gravity

Approximately 1.99 Units not avail. or not appl. [Ref Std: WATER=1]

pH

Not Applicable

Melting point

Not Applicable

Solubility in Water

Nil

Evaporation rate

No Data Available

Volatile Organic Compounds

No Data Available

Kow - Oct/Water partition coef

No Data Available

Percent volatile

0.00 %

VOCl Less H2O & Exempt Solvents

No Data Available

Viscosity

No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

10.2 Materials to avoid

Strong acids, Strong bases, Reactive metals

Additional Information: A void heating above 290 degrees C.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbonyl Fluoride	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion
Oxides of Nitrogen	During Combustion

Hazardous Decomposition: Hydrogen fluoride has an ACGIH Threshold Limit Value of 3 parts per million (as fluoride) as a Ceiling Limit and an OSHA PEL of 3 ppm of fluoride as an eight hour Time-Weighted Average and 6 ppm of fluoride as a Short Term Exposure Limit. The odor threshold for HF is 0.04 ppm, providing good warning properties for exposure.

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HF.

Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number	UPC	ID Number	UPC
78-8096-4318-8		78-8126-9891-4	

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

Additional Information: INGREDIENTS LISTED ON TSCA; EINECS; CDSL; AICS CHEMICAL INVENTORIES.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 2 Flammability: 1 Reactivity: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIS Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Protection: B

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

- Section 1: Product name was modified.
- Copyright was modified.
- Section 8: Skin protection phrase was modified.
- Page Heading: Product name was modified.
- Section 9: Property description for optional properties was modified.
- Section 9: Melting point information was modified.
- Section 2: Ingredient table was modified.
- Section 9: Boiling point information was added.
- 10.1 Conditions to avoid was added.
- 10.2 Materials to avoid was added.
- Section 6: Release measures information was added.
- Section 6: Release measures information was added.
- Section 10: Materials to avoid physical property was added.
- Section 6: Release measures information was deleted.
- Section 10: Materials and conditions to avoid physical property was deleted.

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