PFPE 501 GREASE

Safety Data Sheet

1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier
Material Name: Apiezon PFPE 501.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Product Use: High temperature sealing / lubricating vacuum grease, inert.
Uses advised against: None.

1.3 Details of the supplier of the substance or mixture
Company: M&I Materials Ltd., Hibernia Way, Trafford Park, Manchester, M32 0ZD, UK.
Telephone: +44 (0)161 864 5409.
Emergency Telephone: +44 (0)161 864 5439.
Email: apiezontech@mimaterials.com.

2. Hazards Identification

This product is not classified as hazardous and this document has been compiled for information purposes, in accordance regulation 1907/EC/2006, Annex II, as amended by Regulation (EU) No. 453/2010 and OSHA hazard communication guidelines.

2.1 Classification of the substance or mixture
Regulation (EC) No 1272/2008 (CLP): Not classified.

2.2 Label elements
Regulation (EC) No 1272/2008 (CLP): No symbol or signal word.

2.3 Other hazards
Thermal decomposition at temperatures >300°C can lead to release of toxic and corrosive gases.

3. Composition/Information on Ingredients

3 Mixture
Composition:

Constituent	CAS Number	Contents
PFPE Base Oil	69991-67-9	75 - 85%
PTFE	9002-84-0	15 - 25%

All constituents are listed on the TSCA inventory.

4. First Aid Measures

4.1 Description of first aid measures
Inhalation: None envisaged due to the low vapour pressure of the substance.
Skin: Wash with soap and water.
Eyes: Irrigate with copious amounts of water.
Ingestion: Do not induce vomiting, obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Inhalation: No known effect.
Skin: Contact with skin may cause slight irritation.
Eyes: Contact with eyes may cause slight irritation.
Ingestion: Ingestion may cause nausea and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed
No special treatment required.

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5. Fire Fighting Measures

5.1 Extinguishing media
Carbon dioxide, dry powder, foam or water fog. Do not use water jets.

5.2 Special hazards arising from the substance or mixture
Combustion products include fluorine compounds, such as hydrogen fluoride.

5.3 Advice for fire fighters
Protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures
Spilt product constitutes a slip hazard. Avoid contact with eyes.

6.2 Environmental precautions
No special precautions required.

6.3 Methods and material for containment and cleaning up
Can be wiped from surfaces and residues cleaned with water and detergent.

7. Handling and Storage

7.1 Precautions for safe handling
No special precautions required.

7.2 Conditions for safe storage, including any incompatibilities
No special precautions required.

7.3 Specific end use(s)
No special precautions required.

8. Exposure Controls/ Personal Protection

8.1 Control parameters
At ambient temperature grease has very low volatility, so development of fumes is highly unlikely. At temperatures approaching 300°C, if thermal decomposition occurs, hydrogen fluoride, carbonyl difluoride and other toxic fumes may be released.

8.2 Exposure controls
The level of controls depends on the use. In most cases very small quantities of material are used. Eye washes should be available for emergency use.
Respiratory protection: None required.
Hand protection: Wash hands after use. For prolonged or repeated skin contact gloves are recommended.
Eye protection: Safety glasses with side-shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties
Appearance: Semi-solid white grease.
Odour: None.
pH: Not applicable.
Melting point: Data not available.
Initial boiling point and boiling range: >270°C.
Flash point: Not flammable.

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Flammability (solid, gas): Not flammable.
Upper/lower flammability or explosive limits: Data not available.
Vapour pressure: 1.32 x 10^{-12} Torr at 25°C.
Vapour density: Not applicable.
Relative density: 2.003 @ 25°C.
Water solubility: Insoluble.
Solubility: Data not available.
Partition coefficient: n-octanol/water: Data not available.
Auto-ignition temperature: Data not available.
Decomposition temperature: Data not available.
Viscosity: Not Applicable.
Explosive properties: Data not available.
Oxidising properties: Data not available.

9.2 Other information
Not applicable.

10. Stability and Reactivity

10.1 Reactivity
Stable under normal conditions of use.

10.2 Chemical stability
Stable under normal conditions of use.

10.3 Possibility of hazardous reactions
Data not available.

10.4 Conditions to avoid
Temperatures >250°C.

10.5 Incompatible materials
Strong acids, alkalis and oxidizing agents; alkaline metals; alkaline earth metals; powdered metals; halogenated compounds.

10.6 Hazardous decomposition products
May liberate toxic fluorine compounds (hydrogen fluoride, carbonyl fluoride) at temperatures >300°C.

11. Toxicological Information

11.1 Information on toxicological effects
Likely routes of exposure: Skin and eyes are the most likely routes for exposure. Accidental ingestion may occur. Inhalation is not expected to be a relevant route of exposure.
Acute oral toxicity: Low toxicity: LD50 >2000mg/kg.
Acute dermal toxicity: Expected to be of low toxicity: LD50 >2000mg/kg.
Acute inhalation toxicity: Low volatility makes inhalation unlikely.
Skin corrosion/irritation: Repeated and prolonged skin contact may cause dry skin or irritation.
Eye corrosion/irritation: May cause transient irritation.
Respiratory or skin sensitization: Not expected to be a skin sensitizer.
Aspiration hazard: Not considered an aspiration hazard.
Carcinogenicity/mutagenicity: Not considered a mutagenic hazard or carcinogen.

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This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.

12. Ecological Information

When used and/or disposed of as indicated no adverse environmental effects are foreseen.

12.1 Toxicity
Data not available.

12.2 Persistence and degradability
Data not available.

12.3 Bioaccumulative potential
Data not available.

12.4 Mobility in soil
Data not available.

12.5 Results of PBT and vPvB assessment
Data not available.

12.6 Other adverse effects
No other adverse effects envisaged.

13. Disposal Considerations

13.1 Waste treatment methods
Product and packaging must be disposed of in accordance with local and national regulations. Must not be incinerated due to liberation of toxic gases at temperatures >300°C.

14. Transport Information

Not classified as hazardous under air (ICAO/IATA), sea (IMDG), road (ADR) or rail (RID) regulations.

14.1 UN number
Not relevant.

14.2 UN proper shipping name
Not relevant.

14.3 Transport hazard class
Not relevant.

14.4 Packing group
Not relevant.

14.5 Environmental hazards
Not relevant.

14.6 Special precautions for user
Not relevant.

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15. Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Product is not subject to Authorisation under REACH.
All constituent substances in this product are listed in the TSCA inventory.

15.2 Chemical safety assessment

A chemical safety assessment has been performed for this substance.

16. Other Information

Compiled according to regulation 1907/EC/2006 Annex II, as amended by Regulation (EU) No.453/2010 and OSHA hazard communication guidelines.

16.1 Changes from last issue:

Section 1 - Email contact details.
Section 3 - Composition table.

The information provided in this Safety Data Sheet is correct to our best knowledge, information and belief at the date of its publication. It is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not be construed as guaranteeing any specific property of the product.

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