

**Weiss Bonya**

# Gemini<sup>®</sup> PFPE Greases

Material Safety Data Sheet

## 1. Gemini<sup>®</sup> PFPE GREASE

MC-220/221/222/223/224/225/226/227

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## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Perfluoropolyether	60164-51-4	71-80%
PTFE	9002-84-0	18-27%
Sodium nitrite	7632-00-0	1-3%

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Repeated episodes of polymer fume fever may result in persistent lung effects.

### Potential Health Effects

Skin : May cause: slight irritation, Redness.

Eyes : May cause eye irritation. Discomfort, tearing, Blurred vision.

### Repeated exposure

Sodium nitrite:May cause heritable genetic damage. Adverse effects from repeated ingestion may include: Reduction of blood's oxygen-carrying capacity, which could produce shortness of breath, headache, fatigue, sweating, confusion, abnormal bluish colour of skin or mucous membranes (cyanosis).

### Carcinogenicity

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

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## 4. FIRST AID MEASURES

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### First Aid

#### INGESTION

Never give anything by mouth to an unconscious person. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

#### INHALATION

Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.

#### SKIN CONTACT

In case of contact, wash with water and soap as a precaution.

#### EYE CONTACT

In case of contact, rinse with plenty of water. If eye irritation persists, consult a specialist.

General advice, when symptoms persist or in all cases of doubt seek medical advice.

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## 5. FIRE FIGHTING MEASURES

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### Flash point

None

### Thermal decomposition

300 °C (572 °F)

### Extinguishing Media

The product itself does not burn.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### Fire Fighting Instructions

Wear self-contained breathing apparatus (SCBA). Wear suitable protective equipment.

Standard procedure for chemical fires.

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## 6. ACCIDENTAL RELEASE MEASURES

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### Spill Clean Up

Shovel into suitable container for disposal.

#### **Accidental Release Measures**

Prevent material from entering sewers, waterways, or low areas.

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### **7. HANDLING AND STORAGE**

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#### **Handling (Personnel)**

Avoid breathing vapors from overheated material. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

General industrial hygiene practice.

#### **Storage**

No special storage conditions required. Keep container closed to prevent contamination.

No decomposition if stored and applied as directed.

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### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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#### **Engineering controls**

In the event that the polymer is heated above 260° C (500° F), local ventilation should be used to avoid exposure to fumes.

#### **Personal protective equipment**

Respiratory: No personal respiratory protective equipment normally required. In the case of hazardous fumes caused by overheating, wear self-contained breathing apparatus.

Hand: Additional protection: No particular glove type is recommended, but nitrile may used.

Eyes: Chemical safety goggles.

Skin and body protection : No PPE is specified however, avoid contact with skin, eyes, and clothing. Preventive skin protection.

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### **9. PHYSICAL AND CHEMICAL PROPERTIES**

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Form : grease

Color : white

Odor : none

pH : neutral

Melting point/range : 320 °C (608 °F)

Specific gravity : 1.89 - 1.93 at 24 °C (75 °F)  
Water solubility : insoluble

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## 10. STABILITY AND REACTIVITY

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### Stability

Stable: stable under recommended storage conditions.

### Conditions to avoid

Decomposition temperature 260 °C (500°F)

### Hazardous decomposition products

Hazardous thermal decomposition products: Fluorinated compounds.

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## 11. TOXICOLOGICAL INFORMATION

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### Gemini® PFPE GREASE MC-220/221/222/223/224/225/226/227

Oral ALD : > 11,000 mg/kg , rat

Oral LD50 : > 5,000 mg/kg , rat

Skin irritation : slight irritation, rabbit

Eye irritation : slight irritation, rabbit

Sensitisation : Animal test did not cause sensitization by skin contact, guinea pig

### Perfluoropolyether

Inhalation 4 hrs ALC - Approximate Lethal Concentration : ca. > 19.54 mg/l , rat

Mutagenicity : Did not cause genetic damage in cultured bacterial cells.

Further information : The substance is a polymer and is not expected to produce toxic effects.

### PTFE

Further information : The substance is a polymer and is not expected to produce toxic effects.

### Sodium nitrite

Inhalation 4 hrs, Dust, LC50 : 1.45 mg/l , rat

Mutagenicity : Experiments showed mutagenic effects in cultured bacterial cells.

Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

Genetic damage in animals was observed in some laboratory tests but not in others.

Teratogenicity : Animal testing showed effects on embryo-foetal development at levels below those causing maternal toxicity.

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## 12. ECOLOGICAL INFORMATION

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### Aquatic Toxicity

#### Perfluoropolyether

96 hrs LC50 : Oncorhynchus mykiss (rainbow trout) > 1,000 mg/l ,The substance is a polymer and is not expected to produce toxic effects.

48 hrs EC50 : Daphnia magna (Water flea) > 1,000 mg/l

#### PTFE

The substance is a polymer and is not expected to produce toxic effects.

#### Sodium nitrite

96 hrs LC50 : Oncorhynchus mykiss (rainbow trout) 0.54 mg/l

72 hrs ErC50 : Desmodesmus subspicatus (green algae) > 100 mg/l

72 hrs NOEC : Desmodesmus subspicatus (green algae) 100 mg/l

48 hrs EC50 : Daphnia magna (Water flea) 15.4 mg/l

29 days NOEC Cyprinus carpio (Carp) 21 mg/l

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## 13. DISPOSAL CONSIDERATIONS

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### Waste Disposal

In accordance with local and national regulations.

### Environmental Hazards

Dispose of container properly.

If recycling is not practicable, dispose of in compliance with local regulations.

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## 14. TRANSPORTATION INFORMATION

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### UNRTDG

Not regulated as a dangerous good

### IATA-DGR

Not regulated as a dangerous good

### IMDG-Code

Not regulated as a dangerous good

NOT classified as dangerous in the meaning of transport regulations.

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## 15. REGULATORY INFORMATION

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TSCA : On the inventory, or in compliance with the inventory

SARA 313 Regulated Chemical(s): Sodium nitrite

CERCLA Reportable Quantity : 2,000 lbs , Based on the percentage composition of this chemical in the product.:Sodium nitrite



Updated: May 26th, 2017