



PTFE-Free Thread Sealant

Safety Data Sheet

This SDS is prepared in accordance with the SDS requirements of the Ministry of Employment and Labor (MOEL) of South Korea public notice No. 2016-19

Date of Issue: 2019/11/20

Version: 1.0

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1. Product Identifier

Product form: Mixture

Product Name: PTFE-Free Thread Sealant

1.2. Intended Use of the Product

Recommended Uses and Restrictions: Thread Sealant.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Swagelok Manufacturing Company, LLC

29495 F.A. Lennon Drive

Solon, Ohio 44139

440-519-4000

www.swagelok.com

Supplier

Distributor, add your contact information

1.4. Emergency Telephone Number

Emergency Number: Infotrac: 1-352-323-3500

SECTION 2: HAZARD IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS Classification (KR) Not classified

2.2. 2.2. Label elements

No labelling applicable

2.2. Other Hazards

Other Hazards Which Do Not Result In Classification : Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture/Substance

Distinction of Substance or Mixture : Mixture

| Substance Name | CAS-No. | Formula | Concentration |
|--|------------|--|---------------|
| Nonanedioic acid, polymer with 1,2-propanediol | 29408-67-1 | (C ₉ H ₁₆ O ₄ .C ₃ H ₈ O ₂) _x | 60 - 70% |
| Polypropylene | 9003-07-0 | (C ₃ H ₆) _x | 15 - 25% |
| Magnesium oxide (MgO) | 1309-48-4 | MgO | 15 - 25% |
| Magnesium stearate | 557-04-0 | C ₁₈ H ₃₆ O ₂ .1/2Mg | 1 - 5% |
| 1,3,2-Dioxaborinane, 2,2'-oxybis[4,4,6-trimethyl-, mixture with 2,2'-[(1-methyl-1,3-propanediyl)bis(oxy)]bis[4-methyl-1,3,2-dioxaborinane] | 8063-89-6 | C ₁₂ H ₂₄ B ₂ O ₆ .C ₁₂ H ₂₄ B ₂ O ₅ | < 1% |

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-Aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-Aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 5 minutes. Obtain medical attention if irritation develops or persists.

First-Aid Measures After Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

First-Aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation to eyes.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

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4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Other medical advice or treatment: If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Specific Hazards Arising From the Chemical

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Special Protective Equipment For Fire-Fighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Nitrogen oxides. Magnesium oxides.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Environmental Precautions Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Prevention Measures for Secondary Accidents: Ventilate area.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Technical Measures: Comply with applicable regulations.

Additional Hazards When Processed: Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Local And General Ventilation: Ensure adequate air ventilation.

Precautions For Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Incompatible Substances Or Mixtures: Refer to section 10

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Material Used In Packaging/Containers: No data available

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limits/Biological Limits

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), China, and Korea

| Polypropylene (9003-07-0) | | |
|-----------------------------------|--|--|
| China | OEL STEL | 10 mg/m ³ (calculated-total dust) |
| China | OEL TWA | 5 mg/m ³ (total dust) |
| China | Catalogue of Occupational Hazard Factors | Category 1 - Dusts |
| Magnesium Stearate (557-04-0) | | |
| ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ (inhalable particulate matter (Stearates)) 3 mg/m ³ (respirable particulate matter (Stearates)) |
| Magnesium Oxide (Mgo) (1309-48-4) | | |
| ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ (inhalable particulate matter) |
| ACGIH | ACGIH chemical category | Not Classifiable as a Human Carcinogen |
| Korea | ISHA TWA (mg/m ³) | 10 mg/m ³ |
| China | OEL STEL | 20 mg/m ³ (calculated-fume) |
| China | OEL TWA | 10 mg/m ³ (fume) |

Exposure Limits/Biological Limits No data available

8.2. Exposure Controls

Appropriate Engineering Controls: Suitable eye/body wash equipment should be available in the vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles.



Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Hand Protection: Wear protective gloves.

Eye And Face Protection: Chemical safety goggles.

Skin And Body Protection: Wear suitable protective clothing.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

| | | |
|--|---|-------------------|
| Appearance | : | No data available |
| Physical State | : | Liquid |
| Molecular Mass | : | No data available |
| Odour | : | No data available |
| Odor Threshold | : | No data available |
| pH | : | No data available |
| Melting Point | : | No data available |
| Boiling Point | : | No data available |
| Flash Point | : | No data available |
| Autoignition Temperature | : | No data available |
| Vapour Pressure | : | No data available |
| Relative Vapour Density At 20 °C | : | No data available |
| Solubility | : | No data available |
| N-Octanol/Water Distribution Coefficient | : | No data available |
| Decomposition Temperature | : | No data available |
| Viscosity | : | No data available |
| Explosive Limits (g/m ³) | : | No data available |

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Explosive Limits (vol %) : No data available

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2 Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3 Possibility Of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4 Conditions To Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5 Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6 Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

| | |
|--|-----------------|
| Acute Toxicity | Not classified. |
| Eye Damage/Irritation | Not classified. |
| Skin Corrosion/Irritation | Not classified. |
| Respiratory Sensitizer | Not classified. |
| Skin Sensitization | Not classified. |
| Germ Cell Mutagenicity | Not classified. |
| Carcinogenicity | Not classified. |
| Reproductive Toxicity | Not classified. |
| Specific Target Organ Toxicity (Single Exposure) | Not classified. |
| Specific Target Organ Toxicity (Repeated Exposure) | Not classified. |
| Aspiration Hazard | Not classified. |

11.2 Information on Toxicological Effects - Ingredient(s)

| | |
|-----------------------------------|--------------|
| Magnesium Stearate (557-04-0) | |
| LD50 Oral Rat | > 2000 mg/kg |
| Magnesium Oxide (Mgo) (1309-48-4) | |
| LD50 Oral Rat | 3870 mg/kg |
| Polypropylene (9003-07-0) | |
| IARC Group | 3 |

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

| | |
|--------------------------------|-------------------------------------|
| Ecotoxicity | : Not classified |
| Fish Toxicity / Other Toxicity | : Not classified. |
| Other Information | : Avoid release to the environment. |

12.2. Persistence and Degradability

| | |
|-------------------------------|------------------|
| Ptfе-Free Thread Sealant | |
| Persistence And Degradability | Not established. |

12.3. Bioaccumulative Potential

| | |
|---------------------------|------------------|
| Ptfе-Free Thread Sealant | |
| Bioaccumulative Potential | Not established. |

12.4. Mobility in Soil

 No data available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Treatment Methods: Dispose of waste material in accordance with all local, regional, national, and international regulations.

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SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1 In Accordance with UNRTDG Not regulated for transport

14.2 In Accordance with IATA Not regulated for transport

14.3 In Accordance with IMDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

Asia/Pacific Regulations

Nonanedioic Acid, Polymer With 1,2-Propanediol (29408-67-1)

Regulatory Reference

Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Polypropylene (9003-07-0)

Regulatory Reference

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Magnesium Stearate (557-04-0)

Regulatory Reference

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

Magnesium Oxide (Mgo) (1309-48-4)

| | |
|--|------------|
| Hazardous Substances Subject to Working Environment Measurement | Applicable |
|--|------------|

| | |
|--|------------|
| Hazardous Substances Subject to Control | Applicable |
|--|------------|

| | |
|-------------|---|
| ISHA | Hazardous Substances Subject to Control - Metal |
|-------------|---|

Regulatory Reference

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

1,3,2-Dioxaborinane, 2,2'-Oxybis[4,4,6-Trimethyl-, Mixture With 2,2'-[(1-Methyl-1,3-Propanediyl)Bis(Oxy)]Bis[4-Methyl-1,3,2-Dioxaborinane] (8063-89-6)

Regulatory Reference

Listed on NZIoC (New Zealand Inventory of Chemicals)

SECTION 16: OTHER INFORMATION

| | |
|--------------------------|---|
| Revision Date | : Not applicable |
| Revision Number | : 1.0 |
| Date of Issue | : 2019/11/20 |
| Data sources | : Information and data obtained and used in the authoring of this safety data sheet could come from database subscriptions, official government regulatory body websites, product/ingredient manufacturer or supplier specific information, and/or resources that include substance specific data and classifications according to GHS or their subsequent adoption of GHS. |
| Other Information | : This SDS is prepared in accordance with the SDS requirements of the Ministry of Employment and Labor (MOEL) of South Korea public notice No. 2016-19 |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.