

# MATERIAL SAFETY DATA SHEET

DATE PREPARED: September 23, 2010

SUPERSEDES: New

## SECTION 1: CHEMICAL AND COMPANY IDENTIFICATION

PRODUCT NAME *Style 212-ULE*  
PRODUCT CODES 40212, 44725, 44720, & 44721  
COMPANY NAME

**Garlock**  
SEALING TECHNOLOGIES®

an EnPro Industries company

ADDRESS 1666 DIVISION STREET  
PALMYRA, N.Y. 14522

PHONE NUMBER 315-597-4811 FAX 315-597-3039

**EMERGENCY  
PHONE**

**315-597-4811  
MON. - FRI.  
9:00 AM – 4:00  
PM**

## SECTION 2: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

This product consists of braided flexible graphite yarns with Inconel and graphite fiber reinforcement; and graphite, zinc and polytetrafluoroethylene (PTFE) coating.

Heating PTFE to temperatures in excess of 260° C can evolve toxic fluorine compounds. Additional information concerning PTFE is available in the "Guide to the Safe Handling of Fluoropolymer Resins" published by the Fluoropolymers Division of the Society of the Plastics Industry, Inc...

Excessive levels of some constituents can cause lung and respiratory tract disorders, including irritation, pneumoconiosis, and cancer. These effects generally occur as a result of long term (months, years) exposures to high dust levels. Maintain dust concentrations at low levels.

PRODUCT CONSTITUENTS LISTED AS CARCINOGENS	IARC	OSHA	NTP
Nickel – IARC, Group 2B (possibly carcinogenic to humans). Also classified as potential occupation carcinogen by NIOSH.	Yes	Possible Select Carcinogen	Suspect Carcinogen
Silica, Crystalline, IARC Group 1 (sufficient evidence of carcinogenicity in humans)	Yes	No	Yes

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## *Style 212-ULE*

### SECTION 2: HAZARDS IDENTIFICATION (Continued from Page 1)

<b>Potential Health Effects:</b>	Under normal and intended use conditions it is not anticipated that dust levels sufficient to cause symptoms or adverse health effects will be produced.
<b>Primary Routes of Entry:</b>	Inhalation of dusts or fumes from thermal decomposition. Dermal and ocular contact.
<b>Target Organs:</b>	Prolonged and repeated overexposure can cause lung and respiratory tract damage.
<b>Acute Effects of Overexposure:</b>	High concentrations of dusts may be irritating to the eyes, skin, mucous membranes and respiratory tract. Skin contact may produce reddening of the skin and itching. If exposed to thermal decomposition products of the Polytetrafluoroethylene, temporary symptoms of polymer fume fever (chills, fever, cough and malaise).
<b>Chronic Effects of Overexposure:</b>	Respiratory and lung disorders can result when exposed to prolonged and repeated elevated dust levels. These disorders can include delayed injuries such as pneumoconiosis (a fibrotic disease in the lung tissue) or lung cancer. Chronic lung injury, including silicosis can be progressive, disabling, and may lead to death.
<b>Conditions Aggravated by Exposure:</b>	Smoking aggravates the effects of exposure to some product constituents. Pre-existing respiratory and lung diseases may be aggravated where substantial airborne dust levels are presented.

### SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

<u>COMPONENT NAME</u>	<u>CAS NUMBER</u>	<u>% WT(Optional)</u>
Polyethylene glycol trimethylnonyl ether	60828-78-6	
Polytetrafluoroethylene	9002-84-0	
Nickel (In the form of Inconel 600)	7440-02-0	< 30
Zinc	7440-66-6	< 2
Graphite	7782-42-5	
Silica, Crystalline	14808-60-7	< 1

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## *Style 212-ULE*

### SECTION 4: FIRST AID MEASURES

- Eyes:** Flush the eyes with water for least 15 minutes. Do not rub eyes. Get medical attention if necessary.
- Skin:** Wash contaminated skin thoroughly with soap or mild detergent. Get medical attention if irritation persists. Dermatitis should be treated symptomatically by a physician.
- Inhalation:** No adverse effects are anticipated by breathing small amounts during normal and intended use. If exposed to high dust levels, then remove to fresh air. Drink water and clear throat. Blow nose to clear dust.

### SECTION 5: FIRE FIGHTING MEASURES

- |                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Flash Point:</b> Not Applicable  | <b>Method:</b> Not applicable |
| <b>Upper Flammable Limit (UFL):</b> | Not Applicable                |
| <b>Lower Flammable Limit (LFL):</b> | Not Applicable                |
| <b>Autoignition Temperature:</b>    | Not Applicable                |

#### **Hazardous Products of Combustion**

Composition of by-products from the result of a fire or thermal decomposition will vary depending on the specific conditions. Hazardous gases/vapors include smoke, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins, sulfur dioxide, nickel oxides, nitrogen compounds and carbon monoxide There may be others unknown to us.

#### **Fire fighting Instructions**

As in any fire, use a self-contained breathing apparatus (SCBA) in the pressure-demand mode in conjunction with full protective gear.

#### **Extinguishing Media**

Carbon dioxide, water, or ABC dry chemical. Be sure to use fire extinguisher appropriate to surrounding fire.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### **Small Spill**

No special precautions are necessary where packing is intact and there is no substantial product dust generated. For any small amounts of dust, wet wipe and dispose.

#### **Large Spill**

If substantial amounts of dust are present as the result of a physical disturbance which disrupts the matrix of the material, the material should first be lightly misted with water then vacuumed using a vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filtration device.

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## *Style 212-ULE*

### **SECTION 7: HANDLING AND STORAGE**

#### **Handling**

Dust generated from this material must be managed by wet wiping or vacuuming with HEPA filtration equipped vacuum cleaners. Personnel involved with handling this product should be wearing appropriate personal protective equipment as outlined in section 8.

#### **Work / Hygienic Practices**

Personnel should avoid contaminating cigarettes or tobacco with particles of PTFE. Do not eat or smoke in areas of storage or processing.

#### **Storage**

The product is stable under all conditions of storage.

### **SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT**

#### **Engineering Controls**

**Ventilation:** Normal and intended use of this product should not produce material component levels in substantial airborne concentrations. In keeping with standard Industrial Hygiene practices, if exposure levels are not known, or if dust levels exceed the occupational exposure limits, then use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels to below recommended exposure limits. Maintain and test ventilation systems in accordance with OSHA regulations (29CFR 1910.94). Review OSHA 29CFR part 1910.1000 or 29CFR Part 1926 Subpart Z for exposure level information.

#### **Personal Protective Equipment**

**Eyes and Face:** Special precautions are not normally necessary. If dust is generated, use American National Standards Institute (ANSI) approved eye and face protection when subjected to potential eye and face hazards.

**Skin:** Use of impervious gloves is recommended.

**Respiratory:** Normal intended use of this product should not produce material component levels in substantial concentrations. In keeping with standard Industrial Hygiene practices, if exposure levels are not known, or if the dust levels exceed occupational exposure limits and engineering controls cannot be used; then use the appropriate respiratory protection. Use a NIOSH approved air purifying respirator with an R100 or P100 (high efficiency) filter cartridge in accordance with OSHA respirator program requirements (29CFR 1910.134).

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## Style 212-ULE

### SECTION 8 : EXPOSURE CONTROLS (Continued from Page 4)

#### EXPOSURE GUIDELINES

<u>Component</u>	<u>OSHA PEL (8 Hr. TWA)</u>	<u>ACGIH TLV (8 Hr. TWA)</u>
Polytetrafluoroethylene	None Established	None Established
Zinc	None Established	None Established
Graphite	15 mppcf	2.0 mg/m <sup>3</sup> (respirable dust)
Polyethylene glycol trimethylnonyl ether	None Established	None Established
Silica, Crystalline (Quartz)	10 mg/m <sup>3</sup> / %SiO <sub>2</sub> + 2 (resp) 30 mg/m <sup>3</sup> / %SiO <sub>2</sub> + 2 (total)	0.1 mg/m <sup>3</sup> (resp)
Nickel	1.0 mg/m <sup>3</sup> Nickel Metal	1.0 mg/m <sup>3</sup> Nickel Metal

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Black / Gray braid.	<b>Boiling Point:</b>	Not Applicable
<b>Odor:</b>	Faint hydrocarbon odor	<b>Freezing Point:</b>	Not Applicable
<b>Physical State:</b>	Solid	<b>Melting Point:</b>	Not Applicable
<b>pH:</b>	Not Applicable	<b>Solubility In Water:</b>	< 1 %
<b>Vapor Pressure:</b>	Not Applicable	<b>Specific Gravity:</b>	Not Applicable

### SECTION 10: STABILITY AND REACTIVITY

**Stability:** The material is stable.

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Conditions to avoid:** Do not expose the material to direct flame.

**Materials to avoid:** Strong alkali and oxidizing agents.

#### Hazardous Decomposition Products

Composition of by-products from the result of a fire or thermal decomposition will vary depending on the specific conditions. Hazardous gases/vapors include smoke, hydrogen fluoride, carbonyl fluoride, perfluorocarbon olefins, sulfur dioxide, nickel oxides, nitrogen compounds and carbon monoxide. There may be others unknown to us.

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## *Style 212-ULE*

### **SECTION 11: TOXICOLOGICAL INFORMATION**

Toxicity data is available on the individual components. Call 315/597-3080 for information.

### **SECTION 12: ECOLOGICAL INFORMATION**

No information available for product.

### **SECTION 13: DISPOSAL INFORMATION**

Dispose of in accordance with local, state, and federal regulations. Land fill is normally recommended.

### **SECTION 14: TRANSPORTATION INFORMATION**

D.O.T. Shipping Name: Not Regulated

### **SECTION 15: REGULATORY INFORMATION**

All components are listed on:

US: TSCA

EC: EINECS

Canada: DSL

CERCLA Reportable Quantity:

Nickel: RQ 100 lbs for particles less than 100 micrometers in diameter

Chromium: RQ 5000 lbs for particles less than 100 micrometers in diameter

RCRA Status:

Not Applicable

SARA Title III:

Section 302 Extremely Hazardous Substances:

Not Applicable

Section 311/312 Hazard Categories:

Not Applicable

Section 313 Toxic Chemicals:

Chromium and Nickel

# MATERIAL SAFETY DATA SHEET

September 23, 2010

## *Style 212-ULE*

### **SECTION 15: REGULATORY INFORMATION (Continued from page 6)**

Warning, this product contains the following materials known to the state of California to cause cancer or reproductive effects:

- Crystalline Silica
- Nickel

States such as Pennsylvania, New Jersey, Vermont, Massachusetts, and Rhode Island may also have specific requirements relative to component in this product; consult specific state regulatory requirements for additional information.

### **SECTION 16: OTHER INFORMATION**

This MSDS is prepared to safeguard the health of workers and to comply with the requirements of 29CFR 1910.1200. Consult your employer before working with this material.

#### **DISCLAIMER**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, storage, transportation and release and is not considered a warranty or quality specification. The responsibility for the compliance with existing law and regulations lies with the receiver of the product.

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