



INDUSTRIES 3R

# MATERIAL SAFETY DATA SHEET

## IDENTITY

Part Number: **3R 792**  
 Identity: Graphite lubricated synthetic pump and valve packing  
 Description: Synthetic yarns, braided, lubricated and graphited  
 Other Generic Names: Synthetic graphited packing

## SUPPLIER

Industries 3R inc.  
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## INGREDIENTS AND HAZARDS

	<u>CAS#</u>	<u>%</u>
Acrylic Fibers	25014-41-9	40-80%
Fiberglass	65997-17-3	10-50%
Mineral Oil	8042-47-5	10-50%
Paraffin	8002-74-2	1-20%
Petrolatum	8003-03-8	1-20%
Graphite	7782-42-5	1-20%
Carbon Black*	1333-86-4	<3%

\*The carbon black in this product is inextricably bound in a manner that no exposure occurs during normal use and handling. Therefore this product is not classified as a carcinogen.

## PHYSICAL DATA

Appearance (physical state): Black braded yarn  
 Odor: No odor.  
 Odor threshold: Not applicable  
 pH: Not applicable  
 Melting point/Freezing point: Not applicable  
 Boiling point: Not applicable  
 Flash point: Not applicable  
 Evaporation rate: Not applicable  
 Flammability (solid, gas): Not applicable  
 Flammable limits: LEL: Not applicable  
 UEL: Not applicable  
 Vapor pressure: Not applicable  
 Vapor density: Not applicable  
 Relative density: Not available  
 Solubility: Insoluble in water  
 Partition coefficient: n-octanol/water: Not applicable  
 Auto-ignition temperature: Not available  
 Decomposition temperature: Not available  
 Viscosity: Not applicable

### **FIREFIGHTING MEASURES**

- Suitable (and unsuitable) extinguishing media: Use any extinguishing media that is appropriate for the surrounding fire. This product is an ordinary combustible. Water is most effective.
- Specific hazards arising from the chemical: Solid product will burn slowly under fire conditions. Fine dusts that may be generated during processing may present a greater fire and explosion hazard. Thermal decomposition can yield oxides of carbon.
- Special Fire Fighting Procedures: Fight as any normal fire using self-contained breathing apparatus (SCBA) and full protective clothing where exposed to smoke.

### **ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment, and emergency procedures: None required under normal conditions of use.
- Environmental hazards: Report spill as required by local and federal regulations.
- Methods and materials for containment and cleaning up: Pick-up solid material for reuse or disposal.

### **HANDLING AND STORAGE**

- Precautions for safe handling: Avoid creation and inhalation of dust and fumes. Provide local exhaust ventilation at points where dust or fumes may be generated during cutting and processing. Do not use compressed air for cleaning. Follow good housekeeping procedures to minimize the accumulation of dust in the workplace.
- Conditions for safe storage: No special storage required.

### **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Acrylic Fibers	None Established
Fiberglass	1 fiber/cc TWA ACGIH TLV (respirable fibers) 5 mg/m <sup>3</sup> TWA ACGIH TLV (inhalable)
Mineral Oil	5 mg/m <sup>3</sup> TWA ACGIH TLV (Inhalable) (mineral oil) 5 mg/m <sup>3</sup> TWA OSHA PEL (as oil mist)
Paraffin	2 mg/m <sup>3</sup> TWA ACGIH TLV (as paraffin wax fume)
Petrolatum	5 mg/m <sup>3</sup> TWA ACGIH TLV (Inhalable) 5 mg/m <sup>3</sup> TWA OSHA PEL (as mineral oil mist)
Graphite (natural)	2 mg/m <sup>3</sup> TWA (respirable) ACGIH TLV 15 mppcf TWA OSHA PEL
Carbon Black	3 mg/m <sup>3</sup> TWA ACGIH TLV 3.5 mg/m <sup>3</sup> TWA OSHA PEL

#### Definitions:

PEL means OSHA Permissible Exposure Limit.

TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.

TWA means time-weighted average.

STEL means short-term exposure limit.

- Appropriate engineering controls: No special ventilation required for handling solid material. Local exhaust or process enclosures may be needed if dust or fume are generated in processing.

Personal Protective Measurers:

Respiratory Protection:	None required for handling solid material. If processing generates dust or fumes and engineering controls are not available to control the exposures, appropriate respiratory protection may be required. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.
Skin Protection:	None required for handling solid material. If dust or fumes are generated in processing, wear appropriate gloves.
Eye Protection:	None required for handling solid material. Follow facility requirements. If dust or fumes are generated in processing, wear safety goggles.
Other Protective Equipment:	None normally required. Wear protective clothing in hazardous environments.

**STABILITY AND REACTIVITY**

Reactivity:	Not reactive
Chemical stability:	Stable
Possibility of hazardous reactions:	None known.
Conditions to avoid:	Avoid open flames.
Incompatible materials:	Avoid contact with strong oxidizers.
Hazardous decomposition products:	Thermal decomposition can yield carbon, nitrogen and sulfur and aliphatic and aromatic hydrocarbons.

**TOXICOLOGICAL INFORMATION**

Potential Health Effects:

The hazardous components in this product are not volatile and bound in a polymer matrix so exposure to these chemicals does not occur under normal handling conditions. Dust may be generated while cutting or processing.

Eye Contact:	Dust may cause mechanical irritation.
Skin Contact:	No harmful effects expected for short-term exposure. Prolonged contact may result in defatting or drying of the skin.
Ingestion:	No toxic effects are expected. Ingestion of large amounts may cause gastrointestinal irritation.
Inhalation:	No harmful effects expected. Prolonged inhalation of dust that may be generated in processing may cause adverse lung effects.
Chronic Hazards:	Prolonged inhalation of dust that may be generated in processing may cause adverse lung effects.
Carcinogen:	Carbon black is listed as an IARC Class 2B Carcinogen (Possibly Carcinogenic to Humans). The carbon black in this product are inextricably bound in a manner that no exposure occurs during normal use and handling. None of the other components of this product are listed as a carcinogen by IARC, NTP or OSHA.

Acute Toxicity Data:

Acrylic Fibers:	No toxicity data available
Fiberglass:	No toxicity data available
Mineral Oil:	No toxicity data available
Paraffin:	Oral rat LD50 >5000 mg/kg, Dermal rabbit LD50 >2000 mg/kg
Petrolatum:	Oral rat LD50 >5000 mg/kg, Dermal rabbit LD50 >2000 mg/kg

Graphite: Oral rat LD50 >2000 mg/kg, Inhalation LC50 >2.0 mg/L/4 hr (no mortalities occurred)  
Carbon Black: Oral rat LD50 >8000 mg/kg, Inhalation rat LC50 >4.6 mg/m<sup>3</sup> /4 hr

### **ECOLOGICAL INFORMATION**

Ecotoxicity:

Acrylic Fibers: No data available  
Fiberglass: 96 hr LC50 *Danio rerio* >1000 mg/L, 72 hr EC50 *daphnia magna* >1000 mg/L, 72 hr EC50  
*Pseudokirchnerella subcapitata* >1000 mg/L  
Mineral Oil: No data available  
Paraffin: 96 hr LL50 *Oncorhynchus mykiss* >1000 mg/L, 48 hr LL50 *daphnia magna* >1000 mg/L, 72 hr EL50  
*Pseudokirchnerella subcapitata* >1000 mg/L  
Petrolatum: 96 hr LL50 *Oncorhynchus mykiss* >1000 mg/L, 48 hr LL50 *daphnia magna* >1000 mg/L, 72 hr EL50  
*Pseudokirchnerella subcapitata* >1000 mg/L  
Graphite: 96 hr LC50 *Danio rerio* >100 mg/kg, 48 hr EC50 *daphnia magna* >100 mg/L, 72 hr EC50  
*Pseudokirchnerella subcapitata* >100 mg/L  
Carbon Black: 96 hr LC0 *Danio rerio* 1000 mg/L, 24 hr EC50 *daphnia magna* >5600 mg/L, 72 hr EC50  
*Desmodesmus subspicatus* >10000 mg/L

Persistence and degradability: No data available.  
Bioaccumulative potential: No data available. Not expected to bioaccumulate.  
Mobility in soil: No data available.  
Other adverse effects: These products are inert solids. They are not expected to present any hazard to the environment under normal conditions.

### **DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Dispose in accordance with all applicable local, state/provincial and federal regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

### **OTHER INFORMATION**

While the information and recommendations set forth herein are believed to be accurate, the manufacturer takes no warranty with respect thereto and disclaims all liability from reliance thereon.