



INDUSTRIES 3R

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

IDENTITY:

Part Number:

3R799

Identity:

CARBONE FIBER, GRAPHITE PARTICLE
PACKING

Description:

SUPPLIER :

Industries 3R Inc.

55, route 116 Ouest

Danville (Québec) J0A 1A0

Tel: 819-839-2793

Fax: 819-839-2797

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification: Not classified as hazardous as defined by the GHS and OSHA 29 CFR 1910.1200.

Label Elements: None Required

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS#	Percentage
Carbon Fiber	7440-44-0	30-90%
Polytetrafluoroethylene Resin	9002-84-0	1-40%
Graphite Dispersion	Mixture	1-40%
Zinc	7440-66-6	0.1-5%

SECTION 4. FIRST AID MEASURES

Eyes: Flush with plenty of water, especially under eyelids. Get medical attention if irritation persists.

Skin: No first aid should be needed. Get medical attention if irritation occurs and persists.

Inhalation: If irritation or other symptoms occur, remove to fresh air. Get medical attention if irritation or symptoms persist.

Ingestion: No adverse effects are expected. Consult a physician if large amounts are swallowed.

Most important symptoms/effects, acute and delayed: Dust may cause mechanical eye irritation. Prolonged skin contact may cause irritation or drying of the skin. Inhalation of dust may cause nose, throat and upper respiratory tract irritation.

Indication of immediate medical attention and special treatment: No immediate medical attention is required.

SECTION 5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: Use water, foam and ABC powder. Do not use carbon dioxide. This product burns with difficulty.

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 carbon monoxide, carbon dioxide, hydrogen fluoride, perfluoroisobutene, hexafluoropropene, carbonyl fluoride, tetrafluoroethylene, and zinc oxides.

Special Fire Fighting Procedures: Fight as any normal fire using self-contained breathing apparatus (SCBA) and full protective clothing where exposed to smoke.

SECTION 6. 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. For dust that may be generated, collect with methods such as vacuuming or wet wiping, that minimizes the generation of airborne dust. Only vacuum using a HEPA filter equipped vacuum cleaner.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling: Avoid creation and inhalation of dust. Provide local exhaust ventilation at points where dust 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.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure guidelines:

Component	Exposure Limit/Source
Carbon Fiber	2 respirable fibers/cc TWA manufacturer recommended
Polytetrafluoroethylene Resin	None Established
Graphite Dispersion	5 mg/m ³ TWA OSHA PEL (respirable), 15 mg/m ³ (total dust) 2 mg/m ³ TWA ACGIH TLV (respirable)
Zinc	None Established

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 is generated in processing.

Personal Protective Measurers:

Respiratory Protection: None required for handling solid material. If processing generates dust 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 normally required. If dust is generated in processing, wear appropriate gloves.

Eye Protection: Follow facility requirements.

Other Protective Equipment: None normally required. Wear protective clothing in dusty environments.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Black braided yard.

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 available	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

SECTION 10. 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 monoxide, carbon dioxide, hydrogen fluoride, perfluoroisobutene, hexafluoropropene, carbonyl fluoride, tetrafluoroethylene, and zinc oxides.

SECTION 11. 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 abrasion or injury.

Skin Contact: Prolonged contact may cause irritation and defatting of the skin.

Ingestion: No toxic effects are expected. Ingestion of large amounts may cause gastrointestinal irritation.

Inhalation: Inhalation of dust may cause throat and upper respiratory tract irritation. Inhalation of thermal decomposition of polytetrafluoroethylene may cause polymer fume fever with symptoms of tightness in the chest, fever, cough, shortness of breath and weakness. Severe exposures may cause pulmonary edema. Inhalation of zinc oxide may cause metal fume fever, characterized by metallic taste in the mouth and flu-like symptoms.

Chronic Hazards: None expected.

Carcinogen: None of the components of this product are listed as a carcinogen by IARC, NTP or OSHA.

Acute Toxicity Data:

Carbon Fiber: Oral rat LD50 >2000 mg/kg

Polytetrafluoroethylene Resin: Oral rat LD50 >11,280 mg/kg

Graphite: Oral rat LD50>2000 mg/kg, Inhalation LC50 >2.0 mg/L/4 hr (no mortalities occurred)

Zinc: Oral rat LD50 >2000 mg/kg, Inhalation rat LC50 >5.41 mg/L/4 hr

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Carbon Fiber: 96 hr LL50 Danio rerio >100 mg/L, 48 hr EL50 daphnia magna >100 mg/L, 72 hr EL50

Pseudokirchnerella subcapitata >100 mg/L

Polytetrafluoroethylene Resin: No data available

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

Zinc: 96 hr LC50 Pimephales promelas 780 ug/L, 48 hr EC50 daphnia magna 1833 ug/L, 72 hr IC50 150 ug/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: The product is not expected to cause adverse effects to aquatic organisms.

SECTION 13. 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.

SECTION 14. TRANSPORT INFORMATION

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code): Not applicable – product is transported only in packaged form.

Special precautions: None known.

SECTION 15. REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

EPA SARA 311 Hazard Classification: Not Hazardous

EPA SARA 313 Chemicals: This product contain the following chemicals listed under SARA 313:

Zinc Compounds (Zinc)	7440-66-6	0.1-5%
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Hazardous Substance (40CFR 116) CERCLA: This product is not subject to CERCLA reporting requirements as it is sold. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

California Proposition 65: This product contains the following chemicals known to the State of California to cause cancer and/or reproductive toxicity: None known

SECTION 16. OTHER INFORMATION

NFPA Hazard Rating: Health: 0 Fire: 1 Reactivity: 0

HMIS Hazard Rating: Health: 0 Fire: 1 Reactivity: 0

* Chronic Health Hazard

DISCLAIMER – The information provided in this Safety Data Sheet is based on our current knowledge. While the information and recommendations set forth herein are believed to be accurate, Industries 3R takes no warranty with respect thereto and disclaims all liability in reliance thereon. We recommend testing according to local conditions. The specifications are subject to change without notice.