

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

May be used to comply with Occupational Safety and Health Administration
OSHA's Hazard Communication Standard, (Non-Mandatory Form)
29 CFR 1910.1200. Standard must be consulted for specific requirements.
OMB No. 1218-0072 Form Approved

Section I

<u>Manufacturer's Name</u> Hughes Brothers, Inc. 210 North 13 th , Seward, NE 68434	<u>Emergency Telephone Number</u> CHEMTREC: 1-800-424-9300
<u>Chemical Name</u> Reinforced Carbon Fiber Composite	<u>Telephone Number for Information</u> 402-643-2991, ext 224
<u>Synonyms</u> Carbon Fiber Rebar, CFRP Rebar	

Section II - Hazard Ingredients/Identity Information

Composition Information on Ingredients

Chemical Name	CAS Number	% Range	OSHA PEL
Epoxy Vinylester Based Resin	NA	27%	NA
Carbon Fibers	NA	73%	NA

Section III - Physical/Chemical Characteristics

<u>Appearance and Odor</u> Black	<u>Solubility in Water</u> Insoluble
<u>Specific Gravity (H₂O = 1)</u> 2.0	<u>Evaporation Rate (Butyl Acetate = 1)</u> NA
<u>Boiling Point</u> NA <u>Vapor Density (AIR = 1)</u> NA	<u>Chemical Formula:</u> NA
<u>Vapor Pressure (mm Hg.)</u> NA	<u>Melting Point</u> 800°C 1472°F

Section IV - Fire and Explosion Hazard Data

<u>Flash Point (Method Used)</u> NA	<u>Flammable Limits</u> NA UEL NA
<u>Extinguishing Media:</u> Carbon Dioxide Dry Chemical (small fires) Foam and Water Fog (large fires)	<u>Special Fire Fighting Procedures:</u> Burning rod will create an acrid heavy black smoke and odor that is extremely offensive. Fire fighters must wear self contained breathing apparatus (SCBA). Others must seek fresh air immediately.

Section V - Reactivity Data

Conditions to Avoid: Exposure to Open Flames.	Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, organic acid lmw hydrocarbons
Stability Stable	Hazardous Polymerization Will not occur.
Incompatibility (<i>Materials to Avoid</i>) None known.	

Section VI - Health Hazard Data

ROUTE OF EXPOSURE

INHALATION

Carbon fiber dust can cause respiratory irritation and pulmonary edema.

SKIN

Carbon fiber dust can cause rash, itching, conjunctivitis, coughing and sneezing.

INGESTION

Ingestion of carbon fiber rod or dust is unlikely.

EYE

Prolonged or repeated exposure to dust can cause pain and irritation of eyes.

EMERGENCY AND FIRST AID PROCEDURES

INHALATION

Move victim to fresh air. If breathing has stopped, administer CPR. Call a physician.

SKIN

Wash effected area with soap and water. Wash contaminated clothing before reuse. Long pants and good personal hygiene will maximize comfort.

INGESTION

Call a physician or poison control center immediately. If professional advice is not available DO NOT induce vomiting or give anything by mouth to an unconscious person.

EYE

Flush eyes with water and seek immediate medical attention.

Section VII - Precautions for Safe Handling and Use

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

- Skin:** Wear gloves when possible to protect hands from rough, unfinished surfaces. Long sleeve, buttoned shirts and trousers which cover ankles will protect exposed skin areas during cutting or machining of product.
- Eyes:** Safety glasses with side panel protectors may be appropriate when handling products in a way that creates airborne particles.
- Inhalations:** use ordinary dust mask protection for the nose and mouth to prevent inhalation exposure during cutting or machining of product.

WASTE DISPOSAL METHOD

Dispose of as solid waste in accordance with local, state and federal regulations. Not considered a hazardous waste under federal RCRA regulations.

STORAGE

No special storage considerations needed.

Section VIII - Control Measures

RESPIRATORY PROTECTION:

None normally required. If airborne dust concentrations exceed permissible exposure levels, use protection for nuisance dust.

VENTILATION

Use local exhaust if necessary to prevent nuisance dust.

EYE AND FACE PROTECTION

Wear safety glasses with side shields.

SKIN PROTECTION/PROTECTIVE GLOVES

Wear protective gloves to reduce irritation from dust or slivers.