

SAFETY DATA SHEET



SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MATERIAL IDENTITY:

V-Wrap C220B

EMERGENCY TELEPHONE NUMBER:

CHEMTREC: 800-424-9300

MANUFACTURER:

STRUCTURAL TECHNOLOGIES, LLC
10150 Old Columbia Road, Columbia, MD 21046

INFORMATION TELEPHONE NUMBER:

1-410-859-6539

CHEMICAL FAMILY: Carbon Fiber

SECTION II: HAZARDS IDENTIFICATION

GENERAL HAZARD STATEMENT:

Carbon material is electrically conductive. Electrical systems should be protected from exposure to airborne fiber. Dust particles associated with this product may cause irritation of the skin, eyes, or upper respiratory tract.

EMERGENCY OVERVIEW:**OSHA HAZARDOUS**

Target Organ Effect – Skin Sensitizer, Irritant

Target Organs – Respiratory, Eyes, Skin

HAZARD STATEMENTS:

EYES: Low hazard. May cause temporary irritation.

SKIN: Low hazard for usual industrial or commercial production. No effects expected under normal use.

INHALATION: In some cases – see Section VII. No effects expected under normal use.

INGESTION: Ingestion unlikely under normal use. May cause gastrointestinal irritation.

PRECAUTIONARY STATEMENTS: Wear protective gloves/clothing and eye/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, then continue rinsing.

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NUMBER	% BY WEIGHT
Carbon Fiber	7440-44-0	92 - 96
Epoxy Sizing	25068-38-6	2 - 4

SECTION IV: FIRST AID MEASURES

EYE CONTACT: Flush eyes with water. Avoid rubbing or scratching.

SKIN CONTACT: To relieve skin irritation, wash with soap and water. Avoid rubbing or scratching.

INHALATION: Remove to fresh air. Treat any irritation symptomatically, contact a physician.

INGESTION: Ingestion very unlikely.

SECTION V: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Not flammable or combustible.

SUITABLE EXTINGUISHING MEDIA: Normal firefighting procedures. Carbon dioxide, dry chemical, water spray.

SPECIAL FIRE FIGHTING INSTRUCTIONS: N/A

USUAL FIRE AND EXPLOSION HAZARDS: Carbon fiber may be released in a fire situation, and the fibers are sufficiently conductive to cause severe electrical problems. Burning normally stops when ignition source is removed. Pulp and dust may continue to smolder once ignited. Carbon fiber dust does not present an explosion hazard.

SECTION VI: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: No action shall be taken involving any personal risk or without suitable training. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section VIII).

ENVIRONMENTAL PRECAUTIONS: Avoid dispersal of material and contact with soil, waterways, drains and sewers. Notify authorities of any releases to sewers, soils, waterways or air.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: In case of spill, collect (e.g., sweep up, vacuum, etc.) spilled material and either reuse or dispose of properly. Chopped or milled carbon fibers may be slippery if spilled posing an accident risk. Wear personal protective equipment as described in Section 8 during cleanup activities.

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING AND STORAGE: Store in a cool, dry place. Maintain seal against contamination from dirt and moisture.

OTHER PRECAUTIONS: Protect all electrical equipment, in or near areas in which fiber is handled or used, from contact with airborne particles and filaments to avoid possible damage caused by electrical shorts. Airborne particles and filaments should be controlled so as to minimize (1) skin irritation, (2) electrical shorts in switch gear, etc. due to conductivity of fiber.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS:

HAZARDOUS COMPONENT	PEL	STEL	TLV	Other
Carbon Fiber	15 mg/m ³ (Total)	NE	15 mg/m ³ (Total)	NE
	5 mg/m ³ (Respirable)		3 mg/m ³ (Respirable)	
Epoxy Sizing	Not Determined	NE	Not Determined	NE

ENGINEERING CONTROLS: Adequate ventilation should be provided at points where product is handled. Skin contact should be minimized through process design or protected with the use of protective clothing, eye protection and work gloves.

RESPIRATORY PROTECTIONS: Normal use and processing of this product are not expected to generate carbon fiber dust. Respirable fibers of this product under certain very limited circumstances can be generated. In such circumstances, HEPA respiratory protection should be used to prevent exposure.

EYE PROTECTION: Wear safety goggles or glasses when handling or processing this product in any form.

SKIN AND BODY PROTECTION: Recommended disposable protective garments to eliminate possible skin irritation. Clothing should protect the base of the neck, legs and arms. Latex gloves should be worn when handling this product. Rinse and remove gloves after use, and wash hand thoroughly with soap and water. Gloves should be removed and replaced if there are any signs of degradation or breakthrough. Wear protective clothing to minimize the potential for skin contact. An emergency shower should be readily accessible. Discard any clothing that has become contaminated.

OTHER WORK PRACTICES: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Shower after work using plenty of soap and water.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

FORM:	Resin-coated carbon fibers woven into fabric
COLOR:	Black
ODOR:	Odorless
ODOR THRESHOLD:	N/A
pH:	N/A
MELTING/FREEZING POINT (°F/°C):	N/A
BOILING POINT (°F/°C):	N/A
FLASH POINT (°F/°C):	N/A
EVAPORATION RATE (BAC=1)	N/A
AUTOIGNITION TEMPERATURE (°F/°C):	N/A
UPPER/LOWER EXPLOSIVE LIMIT:	N/A
VAPOR PRESSURE (mm Hg.):	N/A
VAPOR DENSITY (AIR = 1):	N/A
SPECIFIC GRAVITY (WATER = 1):	1.75-1.85
SOLUBILITY IN WATER:	Negligible (Dispersible)
VISCOSITY:	N/A

SECTION X: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended handling and storage conditions.

MATERIALS AND CONDITIONS TO AVOID: Do not expose to strong oxidizing agents such as fluorine. Carbon fiber can react violently with such compounds. Exposure to electrical equipment and circuitry. Avoid contact with strong oxidizing agents.

PRODUCTS EVOLVED FROM HEAT OF COMBUSTION OR DECOMPOSITION: Oxides of carbon and nitrogen. Sizing may boil off as a fume which should be vented.

HAZARDOUS POLYMERIZATIONS: Will not occur under normal conditions of use.

SECTION XI: TOXICOLOGICAL INFORMATION

MATERIAL OR COMPONENT TOXICITY DATA: N/A.

SECTION XII: ECOLOGICAL INFORMATION

AQUATIC ECOTOXICITY: No data available

BIODEGRADABILITY: No data available.

MOBILITY IN SOIL: No data available.

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Industrially approved landfill. It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the US, Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

SECTION XIV: TRANSPORTATION INFORMATION

DOT (U.S.):

Not regulated

IMDG:

Not regulated

IATA:

Not regulated

SECTION XV: REGULATORY INFORMATION

OSHA HAZARDS:

Target organ effect – Skin irritant

Target organs – Respiratory, eyes, skin

PRIMARY ROUTES OF EXPOSURE:

EYES--YES

SKIN CONTACT--YES

INHALATION--NO

INGESTION--NO

HMIS RATING:

CARBON:

HEALTH--1

FLAMMABILITY--0

PHYSICAL HAZARDS--0

GLASS:

HEALTH--2

FLAMMABILITY--1

PHYSICAL HAZARDS--0

SIZING:

HEALTH--1

FLAMMABILITY--1

PHYSICAL HAZARDS--0

FEDERAL EPA:

SARA Title III Section 313: This compound contains no toxic chemicals at or above the de minimis threshold subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

CHEMICAL LIST: This product contains epichlorohydrin and phenyl glycidyl ether at maximum levels of 2 ppm and 6 ppm, respectively. These chemicals are identified on several state chemical lists.

ALL MATERIALS OR COMPONENTS OF THIS PRODUCT ARE EITHER LISTED OR ARE NOT REQUIRED TO BE LISTED IN THE EPA TSCA INVENTORY.

This product does not contain any components regulated under these sections of the EPA.

SECTION XVI: OTHER INFORMATION

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this SDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of

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SPECIAL PRECAUTIONS: Empty containers will retain some of the product residue. When handling or disposing of them, follow all label warnings, other instructions and waste disposal procedures.

EXPLANATION AND DISCLAIMER: Wherever such words or phrases as "hazardous," "toxic," "carcinogen," appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. **ANY EXPOSURE CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, WHICH INCLUDES SUCH FACTORS AS THE SUBSTANCE'S CHARACTERISTICS AS DEFINED IN THE SDS, AMOUNT AND DURATION OF EXPOSURE, OTHER CHEMICALS PRESENT AND PREEXISTING INDIVIDUAL DIFFERENCES IN RESPONSE TO THE EXPOSURE.**

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