



# Safety Data Sheet

JPS Composite Materials Corp. Woven Carbon Fabric

SDS No 500

Date of Preparation: 2/11/16

## SECTION 1: CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**PRODUCT/CHEMICAL NAME:** Woven Carbon Fabric

**FINISH TYPES:**

**APPLICATION:** Industrial Applications

**OTHER DESIGNATIONS:** Woven Carbon Fabric

**COMPANY:** JPS Composite Materials  
2200 S. Murray Ave.,  
P.O. Box 2627,  
Anderson, SC 29624

**PRODUCT INFORMATION:** 1-800-288-0577 (8 am. to 5 pm Eastern Standard Time)

**EMERGENCY PHONE:** 1-800-288-0577

## SECTION 2: HAZARD IDENTIFICATION

\*\*\*\*\*EMERGENCY OVERVIEW\*\*\*\*\*

JPS Composite Materials Corp. coated and finished fabrics are stable under normal ambient conditions

### Emergency Overview

**Appearance and Odor:** Black-colored fiber, resin sizing applied with no distinctive odor

**Statement of Hazard:** Warning! Processing may create a combustible dust and could result in fire and /or explosion should the necessary dust concentration in air and ignition source be present Warning! This may cause mild, temporary mechanical eye and skin irritation.

Prolonged or repeated contact may cause allergic skin reaction and possible sensitization. Vapor or fumes generated during heating or curing may cause eye and respiratory tract irritation.

The product contains an uncured epoxy resin system. Handling and curing should only be done in a well ventilated or closed system.

Dust or particulate from machining, grinding or sawing the cured sized fiber may cause eye, skin, and upper respiratory tract irritation, allergic skin reaction and possible sensitization.

The carbon fibers, dust or particulate are electrically conductive and may create electrical short-circuits that could result in damage to and malfunction of electrical equipment and/or personal injury.

**Primary Entry Routes:** Eyes—Yes      Skin—Yes      Inhalation—Yes      Ingestion—No

**HMIS® Rating:** Health—1      Flammability—1      Reactivity—0      Special—None

### Potential Health Effects:

**Eye:** Contact may cause eye redness and mechanical irritation. Vapor or fumes generated from exposing the product to elevated temperatures may cause irritation. Dust or particulate from machining, grinding, or sawing the cured product may cause mechanical irritation.

**Skin:** Contact may cause mechanical irritation to the skin redness, itching and drying of the skin. Prolonged or repeated contact may cause allergic skin reaction, dermatitis and possible sensitization. Dust or particulate from machining, grinding, or sawing the cured product may cause mechanical irritation and possible dermatitis.

**Inhalation:** May cause mechanical irritation to the mucus membranes and upper respiratory tract. Elevated temperatures may generate vapor or fumes that will cause irritation to the respiratory tract. Dust or particulate from machining, grinding, or sawing the cured product may cause mechanical irritation to the upper respiratory tract.

**Ingestion:** Very unlikely route of exposure. If ingested, the product may be a stomach (gastric) irritant, but is not expected to cause any significant adverse effects.

**Medical Conditions Aggravated by Exposure:** Pre-existing eye, skin, respiratory disorders, may be aggravated by contact and /or exposure to the product, the vapor or fumes generated from heating or curing the product or the dust or particulate from machining, grinding, or sawing the cured product.

**Carcinogenic Information:** The components present in this material at concentrations equal to or greater than 0.1% are not listed or regulated by IARC, NTP, OSHA, or ACGIH® as a carcinogen.

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### SECTION 3: INFORMATION ON INGREDIENTS

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| Component                                                                | CAS®<br>Number         | % by<br>Weight | OSHA (PEL)     | ACGIH® (TLV)   |
|--------------------------------------------------------------------------|------------------------|----------------|----------------|----------------|
| <b>Sizing Information:</b><br>Proprietary, uncured<br>Epoxy resin sizing | Proprietary<br>Mixture | 0.1-3.5        | Not determined | Not determined |

This product is not classified as a Hazardous Chemical as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

The percentage will vary depending on the fabric style and the individual component variation and the sizing content applied.

Where specific exposure limits for component dusts are not established, the levels provided for (Total/Inhalable) dust and (Respirable) fraction reflect the classification of Particulate Not Otherwise Regulated (PNOR) by OSHA or Classified (PNO) by ACGIH®.

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### SECTION 4: FIRST AID MEASURES

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**Eye:** In case of contact with the product or the cured product dust or particulate, immediately flush the eye or eyes with large amounts of water for at least 15 minutes, keeping the eyelids open, get medical attention immediately.

**Skin:** In case of contact with the product or the cured product dust or particulate, immediately wash the skin with mild soap and plenty of room temperature to cool running water. Use a washcloth to help remove the fibers, dust or particulate. To avoid further irritation, do not rub or scratch the irritated areas, Rubbing or scratching may force the fibers, dust or particulate into the skin. If irritation persists, get medical attention immediately.

**Inhalation:** If fibers, dust or particulate are inhaled to a large quantity or if an excessive inhalation of vapors or fumes from heating or curing the sizing occurs, remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, qualified personnel may administer oxygen. Get medical attention immediately.

**Ingestion:** Ingestion of the product or the fibers, dust or particulate from it is unlikely. If swallowed, get medical attention immediately.

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### SECTION 5: FIRE FIGHTING MEASURES

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**Flash Point/ Method of Determination:** Not Determined

**Means of Extinction:** Use water spray, dry chemical, foam or CO<sub>2</sub> to extinguish fires.

**Special Fire Hazards:** Avoid exposure through use of a self-contained positive-pressure breathing apparatus. Warning Processing may create a combustible dust and could result in fire and/or explosion should the necessary dust concentration in air and ignition source be present.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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**Procedures in case of Accidental Release or Leakage:** Avoid contact with skin, eyes or clothing (See Section 8). Clean up material and put into a suitable container and dispose of properly (See Section 13).

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### SECTION 7: HANDLING & STORAGE

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**Handling:** Handle properly to prevent the spread of fiberglass dust or fibers.

**Storage:** Store in proper containers to prevent the spread of dusts and fibers. Low humidity levels will increase the spread of dusts and fibers.

**Precautions to be taken in Handling and Storage:** Store in a cool, dry place. Maintain sealed against contamination from dirt and moisture. Keep away from food and drink. Avoid inhalation of filament or dust particulates generated during process operation.

**Regulatory Requirements:** Keep airborne dust and fiber concentrations below regulatory levels.

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### SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTIVE EQUIPMENT

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**Eye /Face Protection:** Avoid eye contact. Wear coverall goggles, as necessary, to prevent irritation, if airborne dust, fibers or particulate are present. Wear safety glasses with side shields, as necessary, if airborne dust, fibers or particulate are present when machining, grinding or sawing the cured product.

**Skin Protection:** Wear protective clothing such as a loose fitting, long sleeved shirt that covers to the base of the neck, long pants and gloves, as necessary, to prevent irritation. Skin irritation is known to occur primarily at pressure points such as around the neck, wrist, waist, and between fingers.

**Ventilation:** Use local exhaust sufficient to control fibers, dust, particulate, vapor or fumes generated below acceptable exposure limits. If an exhaust ventilation is not available or is inadequate, use a NIOSH approved respirator, as appropriate. Discharge from the ventilation system should comply with applicable air pollution control regulations. Electrical systems, in areas where this product is handled, must be satisfactory for operation in an environment containing electrically conductive fibers, dust or particulate.

**Respiratory Protection:** Not ordinarily required. If sufficient vapor or fumes or are being generated during heating or curing of the production, use a NIOSH approved organic vapor respirator. If sufficient fibers, dust or particulate are generated during use or during machining, grinding or sawing the cured product, use a NIOSH approved dust respirator.

**General Hygiene Recommendations:** Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. Remove any contaminated clothing and launder before reuse. Use vacuum equipment to remove fibers, dust or particulate from clothing and work areas. Compressed air is not recommended.

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## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

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**Appearance and Odor:** Black-colored fiber, resin sizing applied with not distinctive odor

**Melting Point (°F/°C)**.....Carbon fiber: >6512°F/>3600°C

**Specific Gravity (Water=1)**.....1.7—1.8

**pH of Undiluted Product**.....Not determined

**Volatile [Percent (%) by Weight]**.... <1

**Percent (%) VOC**.....Same as the % Volatile Content

**Solubility in Water**.....Negligible

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## SECTION 10: STABILITY & REACTIVITY

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**Stability:** Stable under proper handling and storage conditions.

**Incompatible Materials:** Avoid strong oxidizing agents.

**Products evolved from Heat of Combustion or Decomposition** The products of combustion and decomposition depend on other materials present in the fire and the actual conditions of the fire. Burning will produce carbon and nitrogen oxides and other unidentified gases and vapors that may be toxic. Avoid inhalation.

**Hazardous Polymerization:** Will not occur under proper conditions of use. Rapid heating of the product in bulk may produce an uncontrolled exothermic reaction that may char and decompose the sizing system, generating unidentified gases and vapors that may be toxic. Avoid inhalation.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**Component Toxicity Data:**

**Median Lethal Dose (Species):**

**Oral (LD<sub>50</sub>)**...Proprietary uncured Epoxy resin sizing component #1...30,00 mg/kg (Rat)

...Proprietary uncured Epoxy resin sizing component #2...4,900mg/kg (Rat)

**Inhalation (LD<sub>50</sub>)**...Not Determined

**Dermal (LD<sub>50</sub>)**...Proprietary uncured Epoxy resin sizing component #1...3,000 mg/kg (Rat)

...Proprietary uncured Epoxy resin sizing component #2...2,000 mg/kg (Rabbit)

**Irritation Index, Estimation of Irritation (Species):**

**Skin**...Not Determined

**Eyes**...Not Determined

**Inhalation**...Not Determined

**Sensitization**...Proprietary uncured Epoxy resin sizing (components #1 and #2 together):

...Possible Sensitizer (Human)

**Other:**

**Mutagenic**...Proprietary uncured Epoxy resin sizing (components #1 and #2 together):

- ...Induce mitotic gene conversion in yeast-Positive
- ...Chromosomal aberrations cultured rat liver cells –Positive
- ...Neo-plastic transformation BHK cells-Positive
- ...Metabolic enzymes present assays-Negative
- ...In-vivo assays-All Negative

...Polyacrylonitrile (PAN)-based carbon fiber:

- ...Ames test-5 tester strains-Negative
- ...Sister chromatid exchange (In-vitro mammalian cell systems)-Negative
- ...Unscheduled DNA synthesis assays (In-vitro mammalian cell systems)-Negative
- ...Polynuclear aromatic hydrocarbon in extracts-Negative

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**SECTION 12: ECOLOGICAL INFORMATION**

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**Total Product Data:** No ecological data has been determined on the total product.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**Comply with Federal, State and Local regulation concerning health and environment when disposing of materials.**

**Waste Disposal Methods:** Material for disposal should be placed in appropriate sealed containers to avoid potential human and environmental exposure. 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 U.S. 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.

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**SECTION 14: TRANSPORT INFORMATION**

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**DOT:**

**Proper Shipping Name**.....Not Regulated

**Hazard Class**.....Not Regulated

**Identification Number**.....Not Regulated

**Packing Group**.....Not Regulated

**Label Required**.....None

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**SECTION 15: REGULATORY INFORMATION**

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**SARA Title III:** Section 302/304 Extremely Hazardous Substance: None  
Section 311 Hazardous Categorization:  
Class 1(Acute)  
Class 2 (Chronic)  
Section 313 Toxic Chemicals: None

**CERCLA Section 102**

**(A) Hazardous Substance:** None

**RCRA Information:** Currently, this product is not listed in federal hazardous waste regulations 40 CFR, Part 261.33, paragraphs (e) or (f), i.e. chemical products that are considered hazardous if they become wastes. State or local hazardous waste regulations may also apply if they are different from the federal regulation. It is the responsibility of the user of the product to determine at the time if disposal, whether the product meets relevant waste classification and to assure proper disposal.

**WHMIS (Canada): Classification:** None  
"This product has been classified in accordance with hazard criteria of the "Controlled Products Regulations" and this SDS contains all the information required by the "Controlled Products Regulations."

**Ingredient Disclosure List:** None

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

Warning! The state of California has determined that the following listed materials or components in this product are known to cause cancer, birth defects or other reproductive harm:  
Ethylbenzene (CAS® #100-41-4) trace amount

**U.S., EPA. TSCA Information:** This product is an article as defined by TSCA and is not required to be listed in the TSCA Inventory.

**Ozone Depletion Information:** This product does not contain or is not manufactured with ozone depleting substances as identified in Title VI, Clean Air Act "Stratospheric Ozone Protection" and the regulations set forth in 40CFR, Part 82.

**Other:** State and local regulations may have specific requirements for this product or components of this product; consult specific state and local regulatory requirements for additional information.

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## SECTION 16: OTHER INFORMATION

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**Special Precautions:** Airborne carbon fibers, dust or particulate may create electrical short-circuits that could result in damage to or malfunctioning of electrical equipment and /or resulting in personal injury.

**Explanation and Disclaimer:** Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. 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 exposures, other chemicals present and pre-existing individual differences in response to the exposure.

The data provided in this SDS is based on the information received from our raw material suppliers and other sources believed to be reliable. We are supplying you this data solely in compliance with the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200 and other Federal and state laws as described in Section 15: Regulatory Information.

The information contained in this SDS is proprietary and confidential to JPS Composite Materials. This SDS and the information in it are not to be used for purposes other than compliance with the Federal OSHA Hazard Communication Standard. If you have received this SDS from any other source than JPS Composite Materials or its authorized agent, the information contained in it may have been modified from the original document and it may not be the most current revision.

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