



# Material Safety Data Sheet

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

**MSDS Identification:** Carbon Fabric, Sized or Unsized

**MSDS Number:** 439-3227-00SU-C000-12    **Date:** October 1, 2002    **Page:** 1 of 6

**Supersedes MSDS:** 439-3227-00SU-C000-11

**Manufacturer:**

Hexcel Schwebel  
2200 South Murray Avenue  
P.O. Box 2627  
Anderson, SC 29621

**Emergency Telephone Number:**

800-433-5072 (24-Hour)

**Information Telephone Number:**

864-260-5799 (Normal Business Hours-ET)

**Product Identification:** Carbon Fabric: Sized or Unsized

**Chemical Family:** Woven Carbon Fabric with various types of Sized and Unsized Carbon Fibers.

## Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS <sup>®</sup> Number	% by Weight	OSHA(PEL)	ACGIH <sup>®</sup> (TLV <sup>®</sup> )
Carbon fiber, synthetic	7440-44-0	98.5-100	15 mg/m <sup>3</sup> (Total) 5 mg/m <sup>3</sup> (Respirable)	10 mg/m <sup>3</sup> (Total) 3 mg/m <sup>3</sup> (Respirable)

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

**Where specific exposure limits for component dusts are not established, the levels provided for (Total/Inhalable) dust and (Respirable) fraction reflect the classification of Particulates Not Otherwise Regulated (PNOR) by OSHA or Specified (PNOS) by ACGIH<sup>®</sup>.**

## Section 3: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW:

**Appearance and Odor:**

Black fibers woven into fabrics of varying weight, width and thickness, depending on the style, with and without sizing, with no distinctive odor.

**Statement of Hazard:**

Warning! May cause temporary mechanical irritation of the eyes, skin or upper respiratory tract.

If sized, vapor or fumes generated from heating or curing this product may cause eye and respiratory tract irritation.

Carbon fibers or dust are electrically conductive and may create electrical short-circuits which could result in damage to and malfunction of electrical equipment and/or personal injury.

---

### Section 3: HAZARDS IDENTIFICATION (Continued)

---

**EMERGENCY OVERVIEW (continued):****Primary Routes of Exposure:**

Eye--Yes                      Skin--Yes                      Inhalation--Yes                      Ingestion--No

**HMIS® Rating:**

Health--1                      Flammability--0                      Reactivity--0                      Special--None

**Potential Health Effects:**

**Eye:** Contact may cause mechanical irritation to the eyes. If sized, vapor or fumes from exposure of this product to elevated temperatures may cause irritation to the eyes. Dust from machining, grinding or sawing the cured product may cause mechanical irritation.

**Skin:** Contact may cause mechanical irritation to the skin and possible dermatitis. Dust from machining, grinding or sawing the cured product may cause mechanical irritation.

**Inhalation:** May cause mechanical irritation to the upper respiratory tract. If sized, vapor or fumes from exposure of this product to elevated temperatures may cause irritation to the respiratory tract. Dust from machining, grinding or sawing the cured product may cause mechanical irritation.

**Ingestion:** Ingestion unlikely under normal conditions of use. If any of this product or the cured product dust is swallowed, seek medical attention immediately.

**Medical Conditions Aggravated by Exposure:** Preexisting eye, skin or respiratory disorders may be aggravated by exposure to this product or to the dust from machining, grinding or sawing the cured product.

**Carcinogenic Information:** None of the components present in this material at concentrations equal to or greater than 0.1 % are listed or regulated by IARC, NTP, OSHA or ACGIH® as a carcinogen.

**Other:****OSHA(PEL)****ACGIH®(TLV®)**

Exposure limits for cured product dust as [Particulates Not Otherwise Regulated (PNOR) by OSHA or Specified (PNOS) by ACGIH®]:	15 mg/m <sup>3</sup> (Total) 5 mg/m <sup>3</sup> (Respirable)	10 mg/m <sup>3</sup> (Inhalable) 3 mg/m <sup>3</sup> (Respirable)
--	--	--

---

### Section 4: FIRST AID MEASURES

---

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

**Skin:** In case of contact that causes irritation, immediately wash skin with soap and room temperature to cool running water. Use a washcloth to help remove the fibers. To avoid further irritation, do not rub or scratch irritated areas. Rubbing or scratching may force fibers into the skin. Get medical attention immediately, if the irritation persists.

**Inhalation:** If large amounts of dust, fiber, fumes or vapor are inhaled, 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.

#### Section 4: FIRST AID MEASURES (Continued)

---

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

---

#### Section 5: FIRE FIGHTING MEASURES

---

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

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

**Special Fire Hazards:** Avoid exposure through use of a self-contained, positive-pressure breathing apparatus.

---

#### Section 6: ACCIDENTAL RELEASE MEASURES

---

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

---

#### Section 7: HANDLING AND STORAGE

---

**Precautions to be taken in Handling and Storage:** Store in a cool, dry place. Maintain sealed against contamination from dirt and moisture.

---

#### Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

**Eye/Face Protection:** Avoid eye contact. Wear safety glasses with side shields, as necessary, when using this product or when machining, grinding or sawing the cured product.

**Skin Protection:** 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 the fingers.

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

**Ventilation:** Use local exhaust sufficient to control vapor, fumes, fibers or dust generated. If exhaust ventilation is not available or is inadequate, use a NIOSH approved respirator, as appropriate.

**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 and dust from clothing and work areas. Compressed air is not recommended.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

---

**Appearance and Odor**...Black fibers woven into fabrics of varying weight, width and thickness, depending on the style, with and without sizing, with no distinctive odor.

**Melting Point (°F/°C)**..... 6512°F/3600°C

**Specific Gravity (Water=1)**..... 1.5-1.9

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

**Volatile [Percent (%) by Weight]**.....0

**Percent (%) VOC**..... Not determined

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

---

## Section 10: STABILITY AND REACTIVITY

---

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

**Incompatible Materials:** None

**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 decompose the sizing system, if appropriate, and produce carbon and nitrogen oxides, phenols, aldehydes, acrolein, carboxylic acid, traces of incompletely burned carbon products 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, if appropriate, generating unidentified gases and vapors that may be toxic. Avoid inhalation.

---

## Section 11: TOXICOLOGICAL INFORMATION

---

### **Component Toxicity Data:**

#### **Median Lethal Dose (Species):**

Oral (LD<sub>50</sub>)...Not determined

Inhalation (LC<sub>50</sub>)...Not determined

Dermal (LD<sub>50</sub>)...Not determined

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

Skin...Not determined

Eyes...Not determined

Inhalation...Not determined

---

## Section 12: ECOLOGICAL INFORMATION

---

No ecological data has been determined.

### Section 13: DISPOSAL CONSIDERATIONS

---

**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.

---

### Section 14: TRANSPORT INFORMATION

---

**DOT:**

Proper Shipping Name.... Not regulated  
Hazard Class..... Not regulated  
Identification Number..... Not regulated  
Packing Group..... Not regulated  
Label Required.....None

---

### Section 15: REGULATORY INFORMATION

---

**SARA Title III:**

Section 302/304 Extremely Hazardous Substance:  
None

Section 311 Hazardous Categorization:  
None

Section 313 Toxic Chemicals:  
None

**CERCLA Section 102(a) Hazardous Substance:**  
None

**RCRA Information:**

Currently, the 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 of 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 MSDS contains all the information required by the "Controlled Products Regulations."**

Ingredient Disclosure List:  
None

### Section 15: REGULATORY INFORMATION (Continued)

---

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

Warning! The state of California has determined that the following listed component chemicals in this product may cause cancer, birth defects or other reproductive harm:

None

**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 40 CFR, Part 82.

---

### Section 16: OTHER INFORMATION

---

**Special Precautions:** Airborne carbon fibers or dust are electrically conductive and may create electrical short-circuits that could result in damage to and malfunction of electrical equipment and/or 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 MSDS, amount and duration of exposures, other chemicals present and preexisting individual differences in response to the exposure.**

The data provided in this MSDS 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 MSDS is proprietary and confidential to Hexcel Corporation. This MSDS 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 MSDS from any source other than Hexcel Corporation 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.

**Liability, if any, for use of this product is limited to the terms contained in our sale terms and conditions. We do not in any way warrant (expressed or implied, including any implied warranty for merchantability or fitness for a particular purpose) the data contained or the product described in this MSDS. Additionally, we do not warrant that the product will not infringe any patent or other proprietary or property rights of others.**

**Contact:** David M. Rubin,  
Hexcel Schwebel Environmental, Health and Safety Manager