



Safety Data Sheet

Section 1: PRODUCT AND COMPANY IDENTIFICATION

SDS Identification Name: HexTow™ Carbon Fiber G/P or G/Prime Sized

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Supersedes SDS Number: 437-3427-CAR0-GP00-13

Manufacturer:

Hexcel® Corporation
6700 West 5400 South
West Valley City, UT 84118

Emergency Telephone Number:

800-433-5072 (24-Hour) Hexcel®

Information Telephone Number:

801-252-3400 (Normal Business Hours-MT)

Product Identification Number: HexTow™ Carbon Fiber G/P or G/Prime Sized

Chemical Family: Carbon Fiber with an Epoxy Resin Sizing Applied

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS® Number	% by Weight	OSHA (PEL)	ACGIH® (TLV®)
Sizing Information: Proprietary, uncured Epoxy resin sizing	Proprietary 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 percentages will vary depending on product type, which fiber is used, the individual component's variation and the sizing content applied.

The exposure limits expressed are for each individual component and not for the total product.

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 (PNOC) by ACGIH®.

Section 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance and Odor:

Black-colored fiber, resin sizing applied with no distinctive odor.

Statements 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.

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Section 3: HAZARDS IDENTIFICATION (Continued)

EMERGENCY OVERVIEW (continued)

Statements of Hazard (continued):

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 Routes of Exposure:

Eye--Yes	Skin--Yes	Inhalation--Yes	Ingestion--No
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HMIS[®] Rating:

Health--1* Chronic	Flammability--1	Reactivity--0	Special--None
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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, 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.

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 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: Preexisting eye, skin or 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.

Section 3: HAZARDS IDENTIFICATION (Continued)

EMERGENCY OVERVIEW (continued)

Other:	OSHA (PEL)	ACGIH® (TLV®)
Exposure limits for cured product dust as [Particulate Not Otherwise Regulated (PNOR) by OSHA or Classified (PNO) by ACGIH®]:	15 mg/m ³ (Total) 5 mg/m ³ (Respirable)	10 mg/m ³ (Inhalable) 3 mg/m ³ (Respirable)

The exposure limits for each of the hazardous components must be considered in the total exposure assessment

Section 4: FIRST AID MEASURES

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 the irritation persists, get medical attention immediately.

Inhalation: If fibers, dust or particulate are inhaled in 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.

Section 5: FIRE FIGHTING MEASURES

Flash Point/Method of Determination: Not determined

Means of Extinction: Use water spray, dry chemical, foam or CO₂ 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.

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 and 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: See label on container for the proper temperature. Maintain sealed against contamination from dirt and moisture.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Skin Protection: Protective clothing such as loose fitting long sleeved shirt that covers to the base of the neck, long pants and gloves made of impervious materials, as appropriate, to cover skin areas and prevent irritation. Skin irritation is known to occur primarily at pressure points such as around the neck, wrist or waist and between the fingers.

Respiratory Protection: Not ordinarily required. If sufficient vapor or fumes or are being generated during heating or curing of the product, 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.

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.

General Hygiene Recommendations: Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. Use vacuum equipment to remove the product or the cured product fibers, dust or particulate from clothing and work areas. Compressed air is not recommended.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor	Black-colored fiber, resin sizing applied with no 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
Vapor Pressure (mm Hg.)	Not determined
Vapor Density (Air=1)	Not determined
Viscosity	Not determined
Volatile [Percent (%) by Weight] ..	<1
Percent (%) VOC	Same as the % Volatile Content
Solubility in Water	Negligible

Section 10: STABILITY AND REACTIVITY

Stability: Stable under proper handling 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.

Section 11: TOXICOLOGICAL INFORMATION

Component Toxicity Data:**Median Lethal Dose (Species):**

Oral (LD₅₀)...Proprietary uncured Epoxy resin sizing component #1...30,000 mg/kg (Rat)
...Proprietary uncured Epoxy resin sizing component #2...4,900 mg/kg (Rat)

Dermal (LD₅₀)...Proprietary uncured Epoxy resin sizing component #1...>3,000 mg/kg (Rat)
...Proprietary uncured Epoxy resin sizing component #2...2,000 mg/kg (Rabbit)

Inhalation (LD₅₀)...Not determined

Irritation Index, Estimation of Irritation (Species):

Skin...Not determined

Eye...Not determined

Inhalation (LC₅₀)...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

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 and to assure proper disposal.

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:

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 of disposal, whether the product meets relevant waste classification and to assure proper disposal.

Section 15: REGULATORY INFORMATION (Continued)

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

U.S., EPA and 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, dust or particulate may create electrical short-circuits that could result in damage to or malfunctioning of electrical equipment and/or resulting 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 preexisting 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 Hexcel Corporation. 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 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

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Section 16: OTHER INFORMATION (Continued)

Explanation and Disclaimer (continued):

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 SDS. Additionally, we do not warrant that the product will not infringe any patent or other proprietary or property rights of others.

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Revision History:

12/17/12 Added combustible dust phrase

06/06/12 Update to new format

04/11/07 Changed name from Magnamite[®] to HexTow[™]. Deleted Carbon from section 2, not considered hazardous by OSHA and ACGIH[®].