



TEIJIN CARBON AMERICA, INC.

# SAFETY DATA SHEET

**SDS NO. 0506 Rev C**

EFFECTIVE DATE: 4/1/18

## 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

**Product Identifier:** Tenax®-J – Carbon Fiber Pre-Preg  
**Company:** Teijin Carbon America, Inc.  
121 Cardiff Valley Road  
Rockwood, TN 37854  
**Phone:** (865) 354-4120  
**Fax:** (865) 354-8409  
**Homepage:** <http://www.tejincarbon.com>  
**Contacts:** Mark Klemmer – ES&H Manager  
[mklemmer@tejincarbon.us](mailto:mklemmer@tejincarbon.us)

**Emergency Phone #:** **CHEMTREC (800) 424-9300**

**Recommended Use:** Composite structures

**Uses advised against:** None known

**Method of operation:** See product information

## 2. HAZARD(S) IDENTIFICATION

**Overview:** In the supplied form the product is not hazardous. Exposure to skin or eyes may cause irritation. May cause sensitization through continuous contact in the uncured form.

**Primary Routes of Exposure:** Eye – Yes, Skin – Yes, Inhalation – Yes, Ingestion – No

**HMIS Rating:** Health – 1, Flammability – 0, Reactivity – 1, Special – NONE



TEIJIN CARBON AMERICA, INC.

**Hazard Classification:** May cause eye or skin irritation, otherwise Non Hazardous  
**Hazard Statement:** H315, H320  
**Hazard Symbols:** None  
**Signal Word:** None  
**Health Hazards:** See Section 11  
**Precautionary statement:** Possible irritant to the skin, eyes and respiratory tract when processed due to nuisance dust generation. Fiber is electrically conductive.  
**Physical / Chemical Hazards:** See Section 10 for additional information: In the supplied form the product is not explosive however the processing and buildup of fine dust can lead to a risk of dust explosions. Warning: processing may create combustible dust concentrations in the air.  
**Environmental hazards:** No specific hazards known.  
**Other hazards:** None



3. COMPOSITION/INFORMATION on INGREDIENTS

<u>Name</u>	<u>CAS</u>	<u>% WT</u>	<u>OSHA PEL TWA</u>	<u>ACGIH TLV TWA</u>	<u>SARA</u>
Carbon Fiber	7440-44-0	55-75%	N/A	N/A	No
Thermoset Resin	Proprietary	25-45%	N/A	N/A	No

**Comment on component parts:** No dangerous components.

4. FIRST AID MEASURES

**General information:** N/A  
**Inhalation:** Ensure supply of fresh air. Seek medical attention if breathing becomes difficult.  
**Skin contact:** Supply with medical care. Consult a doctor if skin irritation persists.  
**Eye contact:** In case of contact with eyes rinse thoroughly with plenty of water and seek medical care.  
**Ingestion:** Supply with medical care. Rinse mouth first then give plenty of water to drink. Induce the patient to vomit of his own accord only if fully conscious.  
**Advice to doctor:** Treat symptomatically

5. FIRE FIGHTING MEASURES

**Flash Point:** > 200 °C  
**LEL:** N/A  
**UEL:** N/A  
**Suitable extinguishing media:** Water, Carbon Dioxide, Dry Chemical, Foam  
**Extinguishing media that must not be used:** None Known  
**Special exposure hazards arising from the substance or preparation itself or combustion products:** Carbon monoxide (CO); Nitrogen oxides (NOx).  
**Special protective equipment for firefighters:** Do not inhale combustion gases. Use self-contained breathing apparatus.  
**Additional information:** Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.



## TEIJIN CARBON AMERICA, INC.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	N/A
<b>Environmental precautions:</b>	N/A
<b>Methods for cleaning up:</b>	Take up mechanically. Dispose of material in accordance with local regulations.

### 7. HANDLING AND STORAGE

**Advice on safe handling:** No special measures necessary if used correctly. Optimal storage temperature is between -20 °C <-> -12 °C to prevent premature curing.

**Advice on protection against fire and explosion:**  
Material in current or cured form is stable. Post processing via cutting or sanding may create dust which may form an explosive mixture with air and an ignition source. Steps should be taken to prevent processing dust from accumulating.

**Requirements for storage rooms and vessels:**  
Storage should be in a container or room at a temperature between -20 °C & -12 °C.

**Advice on storage compatibility:** Do not store together with oxidizing agents.

**Further information on storage conditions:**  
Electrical equipment, enclosures and circuits in or near areas where carbon fiber pre-preg is processed should be protected against infiltration or contact with airborne particles or filaments. Carbon fiber is electrically conductive and may cause an electrical short.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Additional advice on system design:** Ensure adequate ventilation on workstations. The effectiveness and design of ventilation systems and their implementation to control dust should be considered. Proper routine housekeeping should be instituted to ensure dust does not accumulate.

**Respiratory protection:** A breathing apparatus is recommended in the event high concentrations of dust are generated during post processing. An N95 filter is sufficient.  
Short- term: an N95 nuisance dust filter / mask may be used.

**Hand protection:** Butyl or nitrile rubber, > 120 min (EN 374)

**Eye protection:** Safety glasses

**Skin protection:** Mechanical irritation accompanied by itching or dermal effects may occur from exposure to material. Appropriate work over-clothing that consists of a light-weight, well ventilated, fabric may prevent the transfer of dust to an individual. Consider taping at the wrist and ankle areas to control contact with exposed areas. A PPE hazard analysis should be conducted based on the user processes.

**General protective measures:** Avoid contact with eyes. Do not inhale dust.

**Hygiene measures:** Wash hands before breaks and after work. Use barrier skin cream.

**Delimitation and monitoring of the environmental exposition:**  
Not determined



## TEIJIN CARBON AMERICA, INC.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	A tacky, black, fabric sheet, consisting of either carbon fiber and thermoset resin
<b>Color:</b>	Black
<b>Odor:</b>	Odorless
<b>pH Value [1%]:</b>	N/A
<b>pH value:</b>	N/A
<b>Boiling point [°C]:</b>	N/A
<b>Flash point [°C]:</b>	N/A
<b>Flammability [°C]:</b>	N/A
<b>Lower explosion limit:</b>	N/A
<b>Upper explosion limit:</b>	N/A
<b>Oxidizing properties:</b>	None
<b>Vapor pressure [kPa]:</b>	N/A
<b>Density at 20°C [g/ml]:</b>	1.40 – 1.80
<b>Bulk density [kg/m<sup>3</sup>]:</b>	N/A
<b>Solubility in water:</b>	Insoluble
<b>Partition coefficient [noctanol/water]:</b>	N/A
<b>Viscosity:</b>	N/A
<b>Relative vapor density in air:</b>	N/A
<b>Evaporation speed:</b>	N/A
<b>Melting point:</b>	ca. 3500 °C (of carbon)
<b>Autoignition temperature:</b>	N/A
<b>Decomposition temperature:</b>	> 290°C
<b>Electrically Conductive:</b>	Yes

### 10. STABILITY AND REACTIVITY

**Hazardous reactions:** Avoid reactions with strong oxidizing agents. Polymerizes exothermically with amines, mercaptans, and Lewis Acids at temperatures  $\geq 25$  °C. Polymerizes in contact with caustic soda. Reacts exothermically with alkaline materials. A process hazard analysis is recommended to determine what, if any, risks are present.

**Hazardous decomposition products:** None known.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute oral toxicity:</b>	Not determined
<b>Acute dermal toxicity:</b>	Irritant
<b>Acute inhalational toxicity:</b>	Irritant
<b>Irritant effect on eye:</b>	Chemical and mechanical skin irritation possible
<b>Irritant effect on skin:</b>	Chemical and mechanical skin irritation possible
<b>Sensitization:</b>	Not specifically determined
<b>Sub-acute toxicity:</b>	Not determined
<b>Chronic toxicity:</b>	Not determined
<b>Mutagenicity:</b>	Not determined
<b>Reproduction toxicity:</b>	Not determined
<b>Carcinogenicity:</b>	Not determined
<b>Experiences made in practice:</b>	Fiber abrasion can cause mechanical skin irritation.



**TEIJIN CARBON AMERICA, INC.**

**12. ECOLOGICAL INFORMATION**

**Fish toxicity:** N/A  
**Daphnia toxicity:** N/A  
**Behavior in environment compartments:**  
Not determined  
**Behavior in sewage plant:** N/A  
**Bacteria toxicity:** N/A  
**Biological degradability:** N/A  
**COD:** Not determined  
**BOD 5:** Not determined  
**AOX advice:** No dangerous components  
**General information:** Ecological data are not available.

**13. DISPOSAL CONSIDERATIONS**

**Product:** For recycling, consult manufacturer and / or waste disposal centers.  
**EU Waste Number:** 160306, 061399  
**Contaminated packaging:** Packaging that cannot be cleaned should be disposed of as product. Uncontaminated packaging may be taken for recycling.  
**EU Waste Number:** 150101, 150102

**14. TRANSPORT INFORMATION**

**Classification according to DOT:** Non Hazardous  
**Classification according to IMDG:** Not classified as "Dangerous Goods"  
**Classification according to IATA:** Not classified as "Dangerous Goods"

**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.

**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.



**TEIJIN CARBON AMERICA, INC.**

**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.

**Exposure Risk:** Not determined

**Chemical safety report:** Not determined

**Labeling:** All chemicals in this product are included on the TSCA Inventory

**Hazard symbols:** None

**R-phrases:** R36/37/38 – Irritation to eyes, respiratory system and skin

**S-phrases:** S36/37/39 – Wear suitable protective clothing such as gloves, eye and face protection for nuisance dust and skin abrasion protection.

**Special labeling:**

**Authorization, TITLE VII:** N/A

**Restrictions:**

**TITLE VIII:** N/A

**TRANSPORT REGULATIONS:** IATADGR (2008).

**16. OTHER INFORMATION**

**VOC (1999/13/CE):** N/A

**Customs Tariff:** Not determined

**European Union (2002/95/EC) RoHS / RoHS2:**

These products do not contain any of the chemicals listed in the RoHS / RoHS2 regulations

<b>REVISION HISTORY – SDS 506 – CARBON FIBER PRE-PREG</b>		
Revision	Effective	Summary of Changes
REV: A	6/9/15	Initial version
REV: B	8/17/16	Removed J. Carling from contacts.
REV: C	4/1/18	Company name changed April 1, 2018 from "Toho Tenax America, Inc." to "Teijin Carbon America, Inc." All references to company name were updated. Revised "Material Safety Data Sheet" as "Safety Data Sheet."