



jb martin

MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT IDENTIFICATION

Product Name:	Polyester/carbon fabric, TT-05-P		
Weaver:	<i>jb martin ltée</i> 445 St-Jacques Québec, Canada J3B 2M1 Tel.: (450) 346-6853		
Raw material:	Grafil, Inc. 5900, 88th Street Sacramento, CA 95828 USA	Kosa Corp. av. Revolucion, no.1425 Mexico, DF. 01040 Fibers division	
Emergency Telephone:	(916) 386-1733	Tel: 01 5325-5640	
General Telephone:	(916) 386-1733		
Facsimile Number:	(916) 383-7668		

SECTION II: COMPOSITION/INFORMATION ON INGREDIENTS

CARBON

<u>Component</u>	<u>CAS RN</u>	<u>Exposure limits¹</u>	<u>% by Weight</u>
Carbon Fiber	7440-44-0	not established ²	≥ 99%
Epoxy resin	not applicable	not established	0,4%

¹ There are no established OSHA PELs or ACGIH TLVs for these ingredients in the form in which they are present.

² At this time neither OSHA nor ACGIH has established any air contaminant limits specific to carbon fibers. OSHA has an established standard for particulate not otherwise regulated (nuisance dust) set at 5 mg/m³ (breathable fraction) and 15 mg/m³ (total dust). ACGIH has established an exposure value of 10 mg/m³ (total dust) for particules not other wise classified.

POLYESTER

Polyester polymer is made from polyethylene terephthalate polymer. It is also known as polyester chip, the polymer immobilizes the constituents of the polymer system (delusterants, catalyst residues, etc.) which therefore presents no likelihood of exposure under normal conditions of processing and handling. The chemical abstracts service number for the polymer is 25038-59-9 and the chemical formula is (C₁₀H₈O₄)_n

SECTION III: HAZARDS IDENTIFICATION CARBON

Emergency Overview

-NONE-

This product is not expected to present an immediate concern for emergency response personnel

Potential Health Effects

Skin: This product may cause slight irritation of the skin. Mechanical irritation may arise from the carbon fiber abrading or becoming imbedded into the skin. Chemical irritation may occur from exposure to sizing present on the fibers.

Eye: Fragments of this product may cause mechanical irritation of the eye. Chemical irritation may occur from exposure to sizing present on the fibers.

Inhalation: Inhalation exposure to breathable fibers of this product is not expected to occur under normal industrial use. However, under very limited circumstances, exposure to breathable fibers of this product can occur and result in irritation of the respiratory tract.

Ingestion: No hazard is expected during normal industrial use. Ingestion is not a likely route of exposure for this product.

Chronic effects/Carcinogenicity: None of the ingredients in this product are listed as carcinogens or potential carcinogens by OSHA, NTP, or IARC. Under very limited circumstances, exposure to breathable fibers of this product can occur and result in irritation to respiratory tract; prolonged exposure may cause more adverse effects.

Signs and symptoms of exposure: Slight irritation of the affected area.

POLYESTER

This product is not considered hazardous by the criteria of the OSHA hazard communication standard (29 C.R. 1910, 1200).

Polyethylene terephthalate could burn if exposed to flame. Decomposition products that spontaneously ignite may also be generated from molten polymer. Combustion products will be comprised of carbon, hydrogen and oxygen. The exact composition will depend on conditions of combustion

SECTION IV: FIRST AID MEASURES

CARBON

Eyes: If fibers get into the eyes, flush eyes with water for 15 minutes. Get medical attention.

Skin: Wash fibers off running water with soap. If fibers are imbedded in the skin, remove fibers with tweezers. Get medical attention if irritation develops or persists.

Inhalation: If there is inhalation exposure to the fibers of this product, remove source of exposure and move victim to fresh air. Get medical attention if irritation develops.

POLYESTER

No adverse health effects have been attributed to polyethylene terephthalate, human patch-testing has shown fibers to be essentially innocuous.

Skin contact with molten polymer should be avoided as extremely painful burns can result if contact occurs, the affected area should be flushed with plenty of cold water, prompt medical attention is advised for burns.

SECTION V: FIRE FIGHTING MEASURES

CARBON

Flammable properties: Not expected to burn. However, under high heat (>750°F), this product may react with oxygen to give off carbon oxides and other decomposition products.

Flash point: Not applicable.

Flammable limits (UFL/LFL): Not applicable

Extinguishing media: This material is not expected to burn in a fire. If this product is present in a fire, fight fire based on the presence of materials that are flammable.

Fire fighting instructions: As in any fire, wear a self-contained breathing apparatus with pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear.

Other information: Do not incinerate. This product is not expected to burn, however, incineration of carbon fibers can generate airborne fibers that can cause electrical malfunction.

See Section XIII – Disposal considerations.

POLYESTER

Fire fighters should protect themselves from decomposition and combustion products that may include carbon monoxide and other toxic gases. The recommended fire fighting procedure is no use class A or class B fire extinguishers or water fog.

Fume removal equipment should be used with high temperature processes such as extruding, melting or drying, small quantities of volatile decomposition products that may be irritating, toxic and combustible can be generated by molten polymer acetaldehyde.

(CAS n:75-07-0) is the principal decomposition product.

Accumulations of polymer on hot machine surfaces such as a melt extruder should be avoided. This minimizes the possible generation of volatile decomposition products.

SECTION VI: ACCIDENTAL RELEASE MEASURES

Collect, sweep up, or vacuum spilled material and either reuse or dispose of properly. Chopped or milled carbon fibers may be slippery if spilled posing an accident risk.

SECTION VII: HANDLING AND STORAGE

Store in a cool dry place. Wash hands with soap and water after handling the product.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering control: No special ventilation requirements. Good general ventilation should exist as part of any sound industrial hygiene program.

Exposure guidelines: Neither OSHA nor ACGIH has established any air contaminant limits specific to carbon fibers. OSHA has established standard for particulates not otherwise regulated (nuisance dust) set at 5 mg/m³ (breathable fraction) and 15 mg/m³ (total dust). ACGIH has established an exposure value of 10 mg/m³ (total dust) for particulates not otherwise classified.

Respiratory protection: Normal use and processing of this product are not expected to generate dust. Breathable fibers of this product can, under limited circumstances, be generated in which case NIOSH-approved HEPA respiratory protection should be used to prevent exposure.

Eye protection: Eye protection should be worn when handling or processing carbon fibers in any form.

Protective gloves: Latex gloves should be worn when handling this product. Wash hands with soap and water after handling the product.

Skin protection: No special precautions are needed.

SECTION IX: PHYSICAL PROPERTIES

Appearance: Continuous fabric fiber.

Physical state: Solid

Odour: None

Vapour pressure: Not applicable

Melting point: Not applicable

Specific gravity: 1,75 – 1,85

Solubility in water: Insoluble

SECTION X: STABILITY AND REACTIVITY INFORMATION

Stability: Stable

Conditions to avoid: None

Incompatibility with other materials: Do not expose to strong oxidizing agents (e.g., fluorine). Carbon fiber can react violently with such oxidizing agents.

Hazardous decomposition products: Not expected under normal conditions of use and processing. At temperature above 250°F, thermal decomposition of the sizing may begin to occur resulting in the release of small amounts of NO_x, CO, organic compounds, and other hazardous substances.

Hazardous polymerization: Will not occur

SECTION XI: TOXICOLOGICAL INFORMATION

No toxicological information exists on this product. Limited toxicological information does, however, exist on the components of this product. Please contact the company (Grafil) for more information concerning these individual components.

SECTION XII: ECOLOGICAL INFORMATION

No ecological information exists on this product.

SECTION XIII: DISPOSAL INFORMATION

The waste material of this product is not expected to be hazardous. Landfill waste material. Do not incinerate carbon fibers since airborne fibers may cause electrical malfunctions. Any disposal practices must be in compliance with federal state, and local laws and regulations. Contact local or state environmental agencies for specific requirements.

SECTION XIV: TRANSPORT INFORMATION
CARBON

This product is not regulated as dangerous or hazardous goods according to the regulations of DOT, IMO, or IATA. Therefore, no hazard label, hazard class, or UN number is applicable to this product.

POLYESTER

Polyester polymer is not classified as a hazardous waste under the resource conservation and recovery act and, unless prohibited by state or local regulation, can be disposed of in municipal landfill or incinerated. This product is not classified by the department of transportation as a hazardous material.

SECTION XV: REGULATORY INFORMATION

Regulatory status on this product: All product ingredients are either on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory or are not required to be. This product and its impurities may trigger other specific reporting, record keeping, and testing requirements under EPCRA/SARA III, CAA, RCRA, SDWA, CERCLA, and CWA.

EPCRA section 313 information: This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

California Prop. 65 status: This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity.

Regulatory information disclaimer: The information given here in section XV – Regulatory information is intended to be as complete as possible. It is the user’s responsibility, however, to determine and comply with all applicable laws and regulations under federal, state, and local requirements in the use of this product.

SECTION XVI: OTHER INFORMATION

None.

The technical department