

## **Section 1: Identification**

**Chemical Product Name/Identifier:** PAN Based Carbon Fabric Styles

**Finish:** Greige, Loom State, Unfinished

**CAS Number:** 7440-44-0

**Synonyms:** Fibrous carbon

**Recommended Use and Restrictions on Use:** Woven textile product used for reinforcement in various resin systems

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## **Section 2: Hazards Identification**

**OSHA HCS Status:** This product is a hazardous chemical, as defined by OSHA at 29 CFR 1910.1200. Hazards identified are based on hazards of the ingredients. The finished product has not been tested.

**Relevant Route of Exposure/Target Organs:** Dermal, Inhalation

**OSHA/GHS Signal Word and Hazard Statements:**

WARNING: Causes mild skin irritation. May cause respiratory irritation.

**OSHA/GHS Classification and Pictograms:**

Skin irritation (Hazard Category 3)

Specific target organ toxicity, single exposure: Respiratory tract irritation (Hazard Category 3)



**OSHA/GHS Precautionary Statements:**

### **Prevention**

Avoid breathing fibers or dust. Use only outdoors or in a well-ventilated area. Keep containers tightly closed.

### **Response**

If inhaled: Remove victim to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

**Storage**

Store in a well-ventilated place. Store locked up. Keep container tightly closed.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**GHS Hazard and Precautionary Statement Codes:** See Section 16.

**Section 3: Composition/Information on Ingredients**

**Chemical Product Name:** Carbon fabric

**Synonyms:** Fibrous carbon

Component	CAS #	Max % by weight
Carbon Fiber (derived from polyacrylonitrile)	7440-44-0	99.5
Fibrous carbon dust	Not Assigned	Not Known <sup>A</sup>
Trade Secret Sizing Chemistry <sup>B</sup>	N/A	3

A) Amount will be dependent upon method of handling

B) Trade secret per fiber producer.

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

**Section 4: First-Aid Measures**

**Skin Contact:** Flush with ample cool water followed by washing with mild soap to remove accumulated fibers.

**Eye Contact:** Flush with flowing water for 15 minutes – seek medical attention.

**Inhalation:** Move to fresh air. Seek medical attention if breathing becomes difficult.

**Ingestion:** Not likely to occur through normal use. Should ingestion occur, seek medical attention.

**Most Important Symptoms/Effects:** None known

**Indication of Immediate Medical Attention and Special Treatment Needed:** Not applicable

**Section 5: Fire-Fighting Measures**

**Extinguishing Media:** Water spray or fog, carbon dioxide or dry chemical.

**Extinguishing Media to avoid:** Full water jet

**Hazardous Combustion Products:** Carbon oxides (COx) and Nitrogen oxides (NOx).

**Protective Equipment:** Firefighters should be equipped with self-contained breathing apparatus and turn out gear.



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## Section 6: Accidental Release Measures

**Personal Precautions:** A release of this product is not expected to pose risks to workers under normal circumstances. If the material is involved in a fire, or if dusts are produced, no action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.

**Protective Equipment:** Wear protective gloves/eye protection/skin protection.

**Methods/Materials for Containment and Cleaning Up:** Dust or loose fibers can be vacuumed or swept with the aid of a dust suppressant. Dispose of in accordance with all government regulations. Do not discharge into waterways or sewer systems without proper authority.

## Section 7: Handling and Storage

**Precautions:** This product should be handled under conditions of good industrial hygiene and in conformity with any local regulations to avoid unnecessary exposure. Use in a well-ventilated area. Do not breathe dust. Avoid contact with skin.

**Storage:** Store in a well-ventilated, dry location.

## Section 8: Exposure Controls/Personal Protection

**Exposure Limits:**

Component	OSHA/PEL	ACGIH/TLV
Fibrous dust	5 mg/m <sup>3</sup> (respirable)	5 mg/m <sup>3</sup>

\* Dust may be produced during handling

**Engineering Measures:** Engineering controls are not usually necessary if good hygiene practices are followed.

**Personal Protection Measures/Equipment:**

**Skin Protection** – Barrier creams, gloves, and long sleeve loose fitting clothing may be required for certain workers who have sensitive skin or contact dermatitis. Work clothing should be laundered separately from other clothing before reuse.

**Eye Protection** – Not normally required, but as a good safety work practice, eye protection such as safety glasses/side shields or equivalent whenever use of the product releases airborne fibrous carbon.

**Respiratory Protection** – If airborne fibrous carbon exceeds the regulatory limits, or if upper respiratory irritation occurs, use a N95 particulate filtering respirator.

**Other Protection** – Observe good personal hygiene.

## Section 9: Physical and Chemical Properties

**Appearance (physical state, color, etc.):** Solid, black

**Odor:** Odorless



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**Odor Threshold:** None

**pH:** None

**Melting Point/Freezing Point:** >3316°C (>6000°F)

**Initial Boiling Point:** Not applicable

**Flash Point:** Not applicable

**Evaporation Rate:** Not applicable

**Flammability:** Not applicable

**Upper/Lower Flammability or Explosive Limits:** Not applicable

**Vapor Pressure:** Not applicable

**Vapor Density:** Not applicable

**Relative Density/Specific Gravity:** 1.76 – 1.86 (carbon density)

**Solubility:** Insoluble

**Partition Coefficient:** Not known

**Auto-ignition Temperature:** Not known

**Decomposition Temperature:** Not known

**Volatility:** Not known

**Viscosity:** Not applicable

## **Section 10: Stability and Reactivity**

**Reactivity:** No data available

**Chemical Stability:** This product is stable.

**Hazardous Reactions:** Under normal conditions of storage and use, hazardous reactions will not occur. Carbon fibers, dust, and fibrous particles are electrically conductive and can cause shorting in electrical equipment. Explosive shorting of high voltage systems is possible.

**Conditions to Avoid:** When exposed to high temperatures may produce hazardous decomposition products.

**Incompatible Materials:** No specific incompatibility

**Hazardous Decomposition Products:** No hazardous decomposition products will be formed during usage of carbon fiber. Complete or partial combustion of the surface coating on "sized" carbon fiber may generate CO<sub>x</sub>, NO<sub>x</sub>, and other/or other trace chemicals.

**Hazardous Polymerization:** Will not occur

## **Section 11: Toxicological Information**

**Relevant Route of Exposure/Target Organs:** Dermal, Inhalation

**Symptoms:** Causes mild skin irritation. Material may cause irritation of the mouth, nose, and throat after inhalation exposure.

**Delayed and Immediate Effects:** Not known

**Chronic Effects (Short and Long Term Exposure):** Not known

**Numerical Measures of Toxicity:**

Carbon: Oral LD<sub>50</sub> (rat): >2000 mg/kg

Dermal LD<sub>50</sub> (rabbit): >2000 mg/kg

**Carcinogenicity:** No ingredient is listed as a carcinogen by the NTP, IARC, or OSHA at 29 CFR 1910 Subpart Z.

**Mutagenicity:** No data available

**Reproductive Toxicity:** No data available

## **Section 12: Ecological Information**

No data available

## **Section 13: Disposal Information**

Do not discharge into waterways or sewer systems without proper authority. Dispose of in accordance with all government regulations.

## **Section 14: Transport Information**

Not regulated as a hazardous material/dangerous good for transportation in all modes of transportation (US DOT, ICAO/IATA, IMO).

## **Section 15: Regulatory Information**

**TSCA Inventory Status:** Exempt per section 8(a), 710.2(f), and 704.5(a)

**SARA Title III Section 302:** None

**SARA Title III Section 304:** None

**SARA Title III Section 311/312 Hazard Categories:** Immediate (acute)

**SARA TITLE III Section 313:** This product does not contain components that are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA or SARA Title III) and 40 CFR 372.

**CERCLA RQ:** Not listed

**California Proposition 65:** None known

**Massachusetts Right-To-Know:** Less than reportable quantity

**New Jersey Right-To-Know:** Less than reportable quantity

**Pennsylvania Right-To-Know:** Less than reportable quantity

**Canada:** All components of this product are included on the Domestic Substances List (DSL) or are not required to be listed on the Canadian DSL.

**Europe:** All components of this product are included on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are not required to be listed on the EINECS.

**China:** All components of this product are included on the Chinese Inventory (IECSC) or are not required to be listed on the Chinese IECSC.

**Japan:** All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

**Korea:** All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean ECL.

**Philippines:** All components of this product are included on the Philippine (PICCS) or are not required to be listed on the Philippine PICCS.

**Australia:** All components of this product are included on the Australian (AICS) or are not required to be listed on the Australian AICS.

## **Section 16: Other Information**

**Date of Preparation or Revision:** 5/31/2015

This product is classified as a Skin Irritant Category 3; however OSHA does not include Category 3 substances in its hazard classification system.

### **GHS Label Hazard Statement Codes**

Signal Word: WARNING

H316: Causes mild skin irritation

H335: May cause respiratory tract irritation.

### **GHS Label Precautionary Statement Codes**

P261: Avoid breathing dusts or fibers.

P271: Use only outdoors or in well-ventilated area.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

### **Abbreviations**

ACGIH/TLV American Conference of Industrial Hygienists Threshold Limit Value



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CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	US Code of Federal Regulations
DOT	US Department of Transportation
EPCRA	Emergency Planning and Community Right to Know Act
GHS	UN Globally Harmonized System of Classification and Labeling of Chemicals
HCS	Hazard Communication Standard
IARC	International Agency for Research on Cancer
ICAO/IATA	International Civil Aviation Organization/International Air Transport Association
IMO/IMDG	International Maritime Organization/International Maritime Dangerous Goods Code
LD <sub>50</sub>	Lethal dose to half of test animals
NTP	National Toxicology Program
OSHA	US Occupational Safety Health Administration
PEL	Permissible exposure limit
RQ	Reportable quantity
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety data sheet
TSCA	Toxic Substances Control Act
UN	United Nations
US/USA	United States

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