

MATERIAL SAFETY DATA SHEET

V-Wrap C180

High Strength Carbon Fiber



1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

MATERIAL IDENTITY: Carbon (Carbon Fiber) V-Wrap C180
INFORMATION TELEPHONE: 410-850-7000

COMPANY: VStructural LLC
7455 T New Ridge Road
Hanover, MD 21076
EMERGENCY TELEPHONE: CHEMTREC: 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL TYPE: Carbon (Carbon Fiber)
CAS Number: 7440-44-0
SUBSTANCE () MIXTURE (0); UN CLASS & UN NUMBER : N.A.

Chemical Name	Comp. (%)	Chemical Formula (Constitutional Formula, Structural Formula)	CAS No.	TSCA
Carbon Fiber	≥94	Carbon Fiber	7440-44-0	Registered
Sizing Agent	≤2	Not open to public	Registered	Registered

3. HAZARDS IDENTIFICATION

CLASS NAME OF HAZARDOUS CHEMICALS FOR MSDS

Non-hazardous material

PHYSICAL & CHEMICAL HAZARDS

Explosive: N/A

ADVERSE HUMAN HEALTH EFFECTS

Acute Toxic Substance: No case of disease, which is caused by Carbon Fiber, has been reported. Short fiber is electrically conductive, and can cause the short circuiting of electrical equipment.

ENVIRONMENTAL EFFECTS

Carbon Fiber is electrically conductive, and it can cause the short circuiting of electrical equipment. Airborne Carbon Fiber can also disturb electrical equipment.

4. FIRST AID MEASURES

EYE

Wash eyes with an excessive amount of water immediately for no less than 15 minutes. If contact lenses are being used, remove the lens and flush the eyes again with water for an additional 5-10 minutes. If the eyes feel uncomfortable or have a pricking feeling, seek medical attention as soon as possible.

SKIN ABSORPTION

May be absorbed through the skin in harmful amounts. May cause skin sensitization, and allergic reaction, which become evident upon re-exposure.

SKIN IRRITATION

No special measures requested.

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INGESTION

Rinse the mouth with fresh water. Drink two-three glasses of water. Induce vomiting, then seek medical attention as soon as possible.

INHALATION

Move to fresh air and wash inside of mouth with water. If dizzy or unbalanced seek medical attention as soon as possible.

ADVISE TO PHYSICIANS

Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

SPECIFIC HAZARDS WITH REGARD TO FIRE-FIGHTING MEASURES

Apply water from a safe distance to cool and protect surrounding area.

EXTINGUISHING MEDIA

In case of fire, use water spray, foam, dry chemical powder or carbon dioxide. Dry chemical powder, carbon dioxide or dry sand should be used for small fires.

6. ACCIDENTAL RELEASE MEASURES

MEASURES FOR HANDLING PERSONNEL

No special measures required.

MEASURES FOR ENVIRONMENTAL EFFECTS

No special measures required.

MEASURES WHEN HANDLING SPILLED SUBSTANCE

Not applicable.

7. HANDLING AND STORAGE

HANDLING

Exposure control for handling personnel: N/A

Protective measures against fire and explosion: N/A

Others: Touching Carbon Fiber directly can cause transient skin irritation. Hold the paper tube while handling bobbins.

STORAGE

Store bobbins in a cool, dark space. Low humidity is recommended.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

No data are available for the product

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Content	Carbon Fiber
LABOR SAFETY & HEALTH ACT (JAPAN) ppm (mg/m ³)	2.9mg/m ³ (reference value by “Kokuji” by Min. of Labor Japan (1995))
OSHA ppm (mg/m ³)	2.0 mg/m ³ as the total dust of first class dust by the Japanese regulation (reference value) etc.
ACGIH ppm (mg/m ³)	10.0 mg/m ³ as the “kyuunyuusei” dust not classified to other categories, etc. (reference value)

ENGINEERING MEASURES

Local extract ventilation recommended where dust and fly are generated by cutting or processing Carbon Fiber. Filter in ventilation is recommended to prevent dust and fly from being discharged into the open air.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Adequate respirator is recommended to keep from inhaling dust and fly particles.

Eye Protection: Adequate eye protection (goggles) is required to keep eyes from dust and fly.

Hand, skin, and body protection: Adequate protective gloves are recommended to keep the skin from dust and fly

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black fiber	Odor:	None
Density:	1.6 ≈2.0	Boiling Point:	N/A
Melting Point:	N/A	Vapor Pressure:	N/A
Vapor Density:	N/A	Solubility (%):	In soluble
		In water:	N/A
		In others:	N/A
Volatility:	N/A	Others:	N/A

10. STABILITY AND REACTIVITY

Flash Point:	None	Spontaneous Ignition temperature:	None
Explosion Limit (%):	None	Combustibility:	Not Spontaneous
Upper:	None		
Lower:	None		
Flammability:	N/A	Dust Explosion:	N/A
Oxidizibility:		Self-Reactivity:	None
	Oxidized by strong oxidizer.		
	Stable for other chemicals.		

11. TOXICOLOGY INFORMATION

Acute toxicity: N/A

Sub-chronic toxicity: N/A

Chronic toxicity: N/A

Carcinogenic effects: In one component of the Sizing Agent, Biphenol A epoxy resin, the Mutagenic effect on a microbe is recognized.

Irritant Properties: Contact with fly or dust can cause skin pricking.

Teratogenic effects: N/A

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12. ECOLOGICAL INFORMATION

Biodegradability: N/A
Bioaccumulation: N/A
Fish Toxicity: N/A

DISPOSAL CONSIDERATION

In case of disposal, this product must be treated as industrial waste, separated from public waste. This product should not be incinerated. Carbon Fiber can not be incinerated well by a general incinerator, and the fibrous fragments, which may be generated by insufficient incineration, may cause the short circuiting of electrical equipment.

TRANSPORTATION INFORMATION

N/A

REGULATORY INFORMATION

Table with 5 columns: Regulatory/Classification, Reg. Info., Substance Name, Allowed Concentration. Rows include TSCA (USA) No., EINECS No., California Proposition 65, FDA, UL, CAS, OSHA.

OTHER INFORMATION

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and are believed to be correct as of the date hereof, VStructural, LLC makes no representations as to the completeness or accuracy thereof, Information is supplied upon the condition that the persons receiving it will make their own determination as to its suitability for their purposes prior to use. In no event will VStructural, LLC be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

N/A = Not Applicable
Established

N/D = Not Determined

N/E = Not