



V2 Carbon Fabrics Safety Data Sheet

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: V2 Carbon Fabrics
Other names: Multiaxial fabric, stitched fabric, non-crimp fabric, knitted fabric
Synonyms: V, VB, VI, VIX, VT, VTX, VU, VX, VXV, V-WEB
Recommended use: For use in composite or other industrial applications as a reinforcement in combination with other materials.
Restrictions of Use: None
Manufacturer's Name: V2 Composites, Inc.
Address: 770 Lee Road 191 Auburn, Alabama 36830
Telephone: 334-502-3000
Emergency phone number: 334-502-3000
Facsimile: 334-502-3088
Website: www.v2composites.com

SECTION 2 - HAZARDS IDENTIFICATION

OSHA/HCS status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture: Not classified.

GHS label elements

Signal word: No signal word.

Hazard Statements: H315, H319

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 explosion. Warning: processing may create combustible dust concentrations in the air.

Environmental hazards: No specific hazards known.

Other hazards: None



SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Carbon Fiber(derived from polyacrylonitrile)
 Polyester Veil (POY, Polyethylene Terephthalate Partially Oriented)
 Polyester Yarn (POY, Polyethylene Terephthalate Partially Oriented)
 Sizing (Organic Surface Binder)

Common Name and Synonyms: Carbon Fiber: carbon fabric, carbon mat, multiaxial, stitched, non-crimp, knitted fabric
 Polyester Veil: Nonwoven
 Polyester Yarn: V-Lock
 Sizing: Binder

Mixtures:

Ingredient Name	% by Volume	CAS number
Carbon Fiber	80-100%	7440-44-0
Polyester Veil	0-25%	25038-59-9
Polyester Yarn	0-5%	25038-59-9
Sizing	0-5%	Not available



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SECTION 4 - FIRST AID MEASURES

Relevant routes of exposure

- Inhalation:** Remove from area to fresh air. If symptoms persist, contact a poison control center, emergency room, or a physician for treatment information.
- Eye Contact:** Remove contact lens and pour a gentle stream of warm water through the affected area for 15 minutes. Do not rub or scratch eyes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.
- Skin Contact:** Remove contaminated clothing and shoes. Run cold water over the affected area for 15 minutes with mild soap. Do not use warm water. Do not rub or scratch affected area. If irritation persists or glass fiber becomes embedded, seek medical attention.
- Ingestion:** Gently wipe or rinse the inside of the mouth with water. Sips of water can be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room, or physician for treatment information.
- Recommendations to doctor:** Treat symptomatically

SECTION 5 - FIRE FIGHTING MEASURES

- Suitable Extinguishing Media:** Dry powder
- Unsuitable Extinguishing Media:** Full water jet
- Specific Hazards from the chemical during a fire:** Carbon monoxide, nitrogen oxides
- Special protective actions for fire-fighters:** Do not inhale combustion gases. Use self-contained breathing apparatus (SCBA).
- Additional information:** Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protection equipment recommended in Section 8.
- Environmental Precautions:** No special precautions are needed in case of a release or spill.
- Containment:** This material will settle out of the air. Prevent from spreading by covering.
- Methods for clean up:** Use an industrial vacuum cleaner with a high efficiency filter to clean up dust. Sweep or gather up material and place in proper container for disposal or recovery. Use vacuuming or wet sweeping methods instead of dry sweeping.

SECTION 7 - HANDLING AND STORAGE

- Handling:** Avoid dust formation, do not breath dust and wear personal protective equipment.
- Advice on general hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Requirements for storage rooms:** No special measures necessary.
- Advice on storage compatibility:** Do not store together with oxidizing agents.
- Storage:** Store at or below 50 degrees Celsius (77°F) and relative humidity less than 85% for optimum performance. Electrical equipment, enclosures and circuits in or near areas where carbon fibers are used should be protected against infiltration or contact with airborne particles or filaments. Carbon fiber is electrically conductive and may cause an electrical short.



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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering Controls:** Use local exhaust or general room/dilution ventilation sufficient to control dust. Proper routine housekeeping should be instituted to ensure dust does not accumulate on surfaces.
- Respiratory Protection:** Breathing apparatus in the event of high concentrations, filter N95.
Short term: filter apparatus, filter N95
- Hand Protection:** Butyl Rubber, >120 min (EN 374)
- Eye Protection:** Standard safety glasses with side shields.
- Skin Protection:** Mechanical irritation accompanied by itching or dermal effects may occur from exposure to material. Protective clothing such as loose fitting long sleeved shirts that covers base of neck, long pants and gloves made of impervious materials to cover skin areas and prevent irritation. Skin irritation is known to occur at pressure points, such as around neck, wrist, or waist and between fingers.
- Hygiene Measures:** Wash hands before and after breaks. Wear clean, body-covering clothing. Good personal hygiene and the use of barrier creams, caps, protective gloves, cotton coveralls or long sleeved loose fitting clothing will maximize comfort. Vacuum equipment may be used to remove fibers from clothes. Work clothing should be laundered separately from other clothing before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid Fiber
Appearance/Color:	Black
Odor:	Odorless
Odor Threshold:	NA
Vapor Pressure:	NA
Vapor Density:	NA
pH:	NA
Relative Density:	1.76-1.86(carbon density)
Solubility (wt.% in water):	Insoluble
Melting Point:	3500 deg C
Boiling Point:	NA
Flash Point:	NA
Evaporation Rate:	NA
Flammability:	NA
Explosive limits:	NA
Partition coefficient: n-octanol/water	NA
Auto Ignition Temp:	NA
Decomposition Temp:	>650 deg C in air, preparation > 290 deg C
Viscosity:	NA
Volume % Volatile:	none
Percent Solid:	100
Electrically Conductive:	Yes



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SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Stable under proper handling conditions. Avoid reactions with strong oxidizing agents.
Conditions to avoid:	Accumulation of fine dust may entail the risk of a dust explosion in the presence of air. The fine dust from a carbon fiber compound or composite that is cut or formed can create additional dust explosion risk depending on the resin or compounding agent. A process hazard analysis is recommended to determine what, if any, risks are present.
Incompatible materials:	None known.
Hazardous Decomposition Products:	No hazardous decomposition products will be formed during normal usage of carbon fiber. Complete or partial combustion of the surface coating on "sized" carbon fiber may generate COx, NOx, and/or other trace chemicals.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute oral toxicity:	Not determined
Acute dermal toxicity:	Irritant
Acute inhalation toxicity:	Irritant
Irritation/Corrosion:	
Skin:	Mechanical skin irritation
Eyes:	Not determined
Sensitization:	Not determined
Sub-acute toxicity:	Not determined
Chronic toxicity:	Not determined
Mutagenicity:	Not determined
Carcinogenicity:	Not determined
Reproductive toxicity:	Not determined
Experiences made in practice:	Fiber abrasion can cause mechanical skin irritation.

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity:	Not available
Behavior in environment	
compartments:	Not determined
Behavior in sewage plant:	Not available
Bacteria Toxicity:	Not available
Biological degradability:	Not available
COD:	Not determined
BOD 5:	Not determined
AOX advice:	No dangerous components
Soil/water partition coefficient(Koc):	Not available



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SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Method: The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

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 similar to product. Uncontaminated packaging may be taken for recycling.

EU Waste Number: 150101, 150102

SECTION 14 - TRANSPORT REGULATIONS

Classification according to DOT: Non Hazardous

Classification according to DOT: Not classified as "Dangerous Goods"

Classification according to DOT: Not classified as "Dangerous Goods"

SECTION 15 - REGULATORY INFORMATION

UNITED STATES

SARA Title III: Section 302/304 Extremely Hazardous Substance: None
Section 311 Hazardous Categorization: None
Section 313 Toxic Chemicals: None
All components are listed or exempted.

USA TSCA:

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.

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: S36/37/38 - Wear suitable protective clothing such as gloves, eye and face protection for nuisance dust and skin abrasion protection.

Special labeling: None

Authorization, TITLE VII: N/A

Restrictions: None

TITLE VIII: N/A

Transport Regulations: IATADGR (2008)



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SECTION 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.

The customer is responsible for determining the PPE code for this material.

SDS ISSUE DATE: 8/19/2015
SDS VERSION NUMBER: 2
SDS FORMAT: (HCS)(29 CFR 1910.1200(g))
SDS REVISION NOTES: typographical errors
SDS AUTHOR: DLM

Disclaimer: V2 Composites does not manufacture the components in the product. Component safety data sheets are available upon request. The SDS originates from the component SDS. Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.