



GHS SAFETY DATA SHEET (SDS)

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Part #2610 - Braided Fiberglass Biaxial Sleeve

FIBRE GLAST DEVELOPMENTS CORP.
385 Carr Drive
BROOKVILLE, OH 45309

TELEPHONE: (937) 833-5200
FAX: (937) 833-6555
**FOR CHEMICAL EMERGENCY
CALL (801) 629-0667 24 HRS.**

RECOMMENDED USE: Standard Composite Manufacturing

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 : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable

Response : Not applicable

Storage : Not applicable

Disposal : Not applicable

Supplemental label Elements : Emits toxic fumes when heated.

Hazards not otherwise

classified : None known.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Substance/mixture : Article

Product name : Fiber Glass Continuous Filament

Other means of identification : Product Family: Product Name:
Chopped Strand: ChopVantage®, ChopVantage® XM, ChopVantage® HP, ChopVantage® XM HP, Delta Chop®, Chopped Strands for Nonwovens
Direct Draw: HYBON®, TUFROV®, InnoFiber® NTY, LFT4000, LFT9000
Yarn: FiberGlass Yarn, L.E.X.® Yarn, TEXO® Yarn, InnoFiber® DCS
Mat: Chopped Strand Mat, MatVantage® II
Roving: Roving for Continuous Laminating, Roving for Pultrusion/Filament Winding, Roving for SMC, HYBON® Roving for Spray Up, HYBON® Woven Roving, PREFORMANCE™ ROVING
INNOFIBER®: CR, HP, LD, TS, XM
Insulation: Texo® HTM Mat
Recycled Products: Chop/Open ESM, Chop/Open Plastic Reinforcement, Chop/Open 10 micron, Chop/Open 900, Reject Roving, Reject Chopped Strand

Ingredient name	%	CAS number
Glass, oxide, chemicals	95	65997-17-3
Organic Surface Binder/Sizing	5	Not available.

Some Fiberglass products contain Textured Polyester Filament Yarn

SUB codes represent substances without registered CAS Numbers.

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4 – FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Description of necessary first aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. If irritation persists, seek medical attention.

Inhalation : None known.

Skin contact : Remove contaminated clothing and shoes. Gently wash with plenty of soap and water. If irritation persists, seek medical attention. If glass fiber becomes embedded, get medical attention.

Ingestion : Not a likely route of exposure.

Most Important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: Dusts from this product may cause temporary mechanical irritation.
Inhalation	: Dusts from this product may cause mechanical irritation of the nose, throat and respiratory tract.
Skin contact	: Dusts from this product may cause temporary mechanical irritation.
Ingestion	: Although ingestion of this product is not likely to occur in industrial applications, accidental ingestion may cause illness or irritation of the mouth and gastrointestinal tract.

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: No specific data.
Ingestion	: No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

NOTES TO PHYSICIAN	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first aiders	: No action shall be taken involving any personal risk or without suitable training.

SECTION 5 – FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the Chemical : No specific fire or explosion hazard. Material is not an electrical conductor and may accumulate static charge.

Hazardous thermal decomposition Products : Fiberglass will not burn, but smoking of the product may occur at approximately 400 -500 °F (approximately 200 - 260 °C) due to decomposition of the surface binder. Surface binders may decompose in a fire situation and release carbon monoxide, carbon dioxide and water. Additionally, there are many chemicals that can evolve during any partial decomposition of chemical products. The amounts or identities cannot be predicted and can differ in each situation.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special protective equipment
For fire-fighters**

: Fiberglass itself will not support combustion, but in a sustained fire, proper protection against products of combustion from the fuel and sizing/binder must be worn.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency

Personnel

: No special protection is required

For emergency responders

: No special protection is required

Environmental precautions

: Fiberglass is generally considered to be an inert solid waste. No special precautions are needed in case of a release or spill.

Methods and materials for containment and cleaning up

Small spill

: Vacuum or sweep up material and place in a designated, labeled waste container.

Large spill

: Vacuum or sweep up material and place in a designated, labeled waste container.

Reference to other sections

: See Section 1 for emergency contact information
See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8).

Advice on general

Occupational 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.

Conditions for safe storage,

Including any incompatibilities: Store in accordance with local regulations.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
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Synthetic vitreous fibers	<p>OSHA PEL (United States). TWA: 15 mg/m³ TWA: 5 mg/m³ Form: Respirable TWA: 15 mg/m³ Form: Total dust</p> <p>ACGIH TLV (United States). TWA: 1 f/cc Form: Continuous filament glass fibers TWA: 5 mg/m³, (Inhalable) Form: Continuous filament glass fibers TWA: 3 mg/m³ Form: Respirable TWA: 10 mg/m³ Form: Total dust</p> <p>ACGIH TLV (United States, 6/2013). TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction TWA: 1 f/cc 8 hours. Form: respirable fibers: length greater than 5 µm; aspect ratio equal to or greater than 3:1 as determined by the membrane filter method at 400-450X magnification (4-mm objective) phase contrast illumination.</p>
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Key to abbreviations

A = Acceptable Maximum Peak

ACGIH = American Conference of Governmental Industrial Hygienists

C = Ceiling Limit

F = Fume

IPEL = Internal Permissible Exposure Limit

OSHA = Occupational Safety and Health Administration

R = Respirable

S = Potential skin absorption

SR = Respiratory sensitization

SS = Skin sensitization

STEL = Short term Exposure limit values

TD = Total dust

TLV = Threshold Limit Value

TWA = Time Weighted Average

Z = OSHA 29CFR 1910.1200 Subpart Z – Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Appropriate engineering controls

: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

: Good personal hygiene and the use of barrier creams, caps, protective gloves, cotton coveralls or long sleeved loose fitting clothing will maximize comfort. Appropriate techniques should be used to remove potentially contaminated clothing. Work clothing should be laundered separately from other clothing before reuse. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes/face protection

: Safety glasses with side shields

Hands

: Use gloves to protect against physical irritation or injury if required by handling conditions.

Body protection

: Wear clean, body-covering clothing

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks

involved and should be approved by a specialist before handling this product.

Respiratory protection

: If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Solid
Color	: White to Yellowish
Odor	: Odorless
Odor threshold	: Not Available
Flash point	: Closed Cup: Not applicable (product does not sustain combustion)
pH	: Not available
Boiling point	: Not available
Melting point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Flammability (solid, gas)	: Not available
Lower and upper explosive (flammable) limits	: Not available
Relative density	: 2.65 to 2.7
Solubility	: Insoluble
Vapor pressure	: Not available
Vapor density	: Not available
Volatility	: 0% (v/v), 0% (w/w)
Evaporation rate	: Not available
Viscosity	: Not available
Partition coefficient n-octanol/water	: Not available
% Solid (w/w)	100

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
Incompatible materials	: None known.
Hazardous decomposition Products	: Fiberglass products may release small amounts of acetic acid and other organic materials at elevated temperatures.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Irritation/Corrosion

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Sensitization

Conclusion/Summary

Skin : No known significant effects or critical hazards.

Respiratory : No known significant effects or critical hazards.

Mutagenicity

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Classification

Product/ingredient name	OSHA	IARC	NTP
Glass, oxide, chemicals	-	3	-

Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

Reproductive toxicity

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Target organs

: Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes

Aspiration hazard

Not available

Information on likely routes of exposure

Potential acute health effects

Eye contact : Dusts from this product may cause temporary mechanical irritation.

Inhalation : Dusts from this product may cause mechanical irritation of the nose, throat and respiratory tract.

Skin contact : Dusts from this product may cause temporary mechanical irritation

Ingestion : Although ingestion of this product is not likely to occur in industrial applications, accidental ingestion may cause illness or irritation of the mouth and gastrointestinal tract.

Over-exposure signs/symptoms

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : No specific data.
Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Conclusion/Summary : There are no known health effects from the long term use or contact with nonrespirable continuous filament fibers, which is the type of fiberglass that PPG produces. Nonrespirable fibers cannot reach the deep lung because they have a diameter of greater than 3.5 micrometers. Fibers of this diameter cannot penetrate the narrow, bending passages of the human respiratory tract to reach the lower regions of the lung and thus, have no possibility of causing serious pulmonary damage. Instead, they deposit on the surfaces of the upper respiratory tract, nose, or pharynx. These fibers are then cleared through normal physiological mechanisms.

Animal Study: In 2000, the Institute of Occupational Medicine (IOM) in Scotland published the results of a long term inhalation study in animals exposed to fibers that were manufactured to be RESPIRABLE. Animals were exposed to a very high concentration of these RESPIRABLE fibers (1022 fibers/cc for 5 hours/day, 7 days/week for 52 weeks). Exposure to these microfibers resulted in the development of fibrosis, lung cancer and mesothelioma as a result of the fibers being able to reach the lower regions of the lung.

Chopped, crushed or severely mechanically processed fiberglass may contain a very small amount of respirable fibers that could reach the deep lung. The measured airborne concentration of these respirable fibers in areas where severe processing of fiberglass occurred has been shown to be extremely low and well below the TLV. Repeated or prolonged exposure to respirable glass fibers may cause fibrosis, lung cancer and mesothelioma. PPG fiberglass, in the form supplied, does not contain respirable fibers.

Epidemiology Studies: Two major studies in the US (performed by the University of Pittsburgh) and Europe (performed by the International Agency for Research on Cancer) showed no increase in lung cancer or respiratory disease among people working in production facilities producing NONRESPIRABLE continuous filament fiberglass. An additional smaller study performed in Canada also did not show an association between exposure of workers to fiberglass and respiratory cancer.

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity**Acute toxicity estimates**

Not available

SECTION 12 – ECOLOGICAL INFORMATION**Toxicity**

Not available

Persistence and degradability

Not available

Bioaccumulative potential

Not available

Mobility in soil

**Soil/water partition
Coefficient (K_{oc})** : Not available.

SECTION 13 – DISPOSAL CONSIDERATIONS**Disposal methods**

: 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, solutions 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.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling and information and protection of employees. Section 6: Accidental release measures.

SECTION 14 – TRANSPORT INFORMATION

	DOT	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.
 IMDG : None identified.
 IATA : None identified.

Special precautions for user : -

SECTION 15 – REGULATORY INFORMATION

United States Inventory (TSCA 8b) : All components are listed or exempted.
Australia Inventory (AICS) : All components are listed or exempted.
Canada Inventory (DSL) : All components are listed or exempted.
China Inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan Inventory (ENCS) : All components are listed or exempted.
Korea Inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : All components are listed or exempted.
Philippines Inventory (PICCS) : All components are listed or exempted.

United States

SARA 302/304

SARA 304 RQ : Not applicable.

Composition/information on ingredients

No products were found

SARA 311/312

Classification : Not applicable

Composition/information on ingredients

No products were found.

SECTION 16 – OTHER INFORMATION

Revision Date

08/08/2023

Hazardous Material Information System (U.S.A.)

Health: 1 **Flammability:** 0 **Physical Hazards:** 0

(*)-Chronic Effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required in MSDSs under 29CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA).

National Fire Protection Association (U.S.A.)

Health: 1 **Flammability:** 0 **Instability:** 0

The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with **Fibre Glast Developments Corporation** or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.