

Safety Data Sheet (SDS)

Section 1: Identification

This section identifies the chemical(s) on the SDS as well as the recommended uses and contact information.

Polystrand E-Glass and Polyethylene Terephthalate Glycol (PETG) Copolyester with or without UV additives, pigments, and coupling agents. "PETG" Copolyester Composite Tape and Laminates

Polystrand Product Identifier includes "PETG" followed by an alphanumeric code which defines the product in further detail.
Example PETG 5811.7BT U

PETG: Industrial, E Glass Roving;
2 digits: Fiber content by % example: 58% glass Fiber Content ranges from 55% to +65% in Polystrand products.
"1": Copolyester
1 digit: Fiber loading
Decimal: Revision based on Polystrand's Bill of Materials (resin source, additives)
Pigment: "B" for black. "Natural" if no letter is assigned
Alpha code: Reference to laminate configuration (cross plied); X- Cross ply; T- Tri ply; Q for Quad Ply U-unidirectional

Manufacturer Information:	
Polystrand, Inc.	Phone: 303-515-7700
8375 Highfield Parkway	Fax: 303-515-7701
Englewood, Colorado USA 80112	www.Polystrand.com

Section 2: Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and appropriate warning information

Hazard Classification: Oxidizing solid. May intensify fire; oxidizer.

Signal Word: Warning

Hazard Statement: May intensify fire, oxidizer: Code H272 Category 3
Processing or handling may produce airborne fibers causing respiratory tract irritation or lung damage.
Fibers and dust may cause mechanical skin and eye irritation.
Contact with molten substance/product may cause severe burns to skin and eyes.

Symbol:



Recycling Code **OTHER**

Precautionary Statements:

Keep away from open flame and heat sources.
Heated polymer: Skin/Eye contact can cause serious thermal burns.
Vapors formed when polymer is heated may be irritating to the eyes.
In case of fire: Water, Dry Chemical Extinguisher (ABC or AB), Foam, or CO₂. Use water spray or fog.
15% to 45% of the composite is flammable.
No known acute effects of this product resulting from skin contact at room temperature.
Cut edges of the composite may be sharp. Use protective gloves when handling.
Polystrand Thermoplastics are 100% recyclable as a PETG composite resin matrix and glass material.



Section 3: Composition / Information on Ingredients

This section identifies the ingredients contained in the product indicated on the SDS,

Substances:

Chemical Name(s):

Copolyester PETG, UV Stabilizer, Coupling Agent, Pigment, and Films.

Common Name:

Continuous Fiber Reinforced Thermoplastics, X-Ply, Tri-Ply, Quad Ply.

Chemical Abstracts Service (CAS) Number:

CAS Registry #	Component
25640-14-6	PETG Polyethylene Terephthalate Glycol
65997-17-3	Fibrous glass, continuous filament
13333-86-4	Carbon Black (Pigment) Low density polyethylene

The specific chemical identity and percentage (concentration) of composition has been withheld as a trade secret.

Section 4: First Aid Measures

This section describes the initial care that should be given by untrained responders to an individual who has been exposed during processing.

Eye Contact:

Check for and remove contact lenses. Rinse eyes with water for 15 min. If irritation persists seek medical attention.

Skin contact:

Wash affected area with mild soap and water. Wash contaminated clothing before reuse. If irritation persists seek medical attention. If glass fiber becomes embedded seek medical attention.

Heated composite: For serious burns from heated polymer, get medical attention. In case of skin contact immerse in or flush with clean, cold water and see a physician for removal of adhering material and treatment of burn.

Get medical attention

Ingestion:

If ingested, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If irritation persists seek medical attention/advice.

Inhalation:

Allow the victim to rest in a well ventilated area. If irritation persists seek medical attention.

Notes to physician:

Burns should be treated as thermal burns. The material will come off as healing occurs; therefore, immediate removal from the skin is not necessary.

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.



Section 5: Fire Fighting Measures

This section provides recommendations for fighting a fire caused by the ignition of the composite.

Flammability of the product:

May be combustible at high temperature. Glass components of the composite are non-combustible which greatly reduces the flammability of the material.

Minimum Ignition Temperature:

454 °C (PETG resin)

Flash Points:

Not applicable, combustible solid (resin)

Products of combustion:

Oxides of carbon, Nitrogen and small amounts of hydrogen cyanide, ammonia aldehydes and aliphatic hydrocarbons.

Fire Fighting Media:

Water spray, Dry Chemical Extinguisher (ABC or AB), or CO₂. Use water spray or fog.

Protective Clothing:

Firefighters should wear full protective gear.

NFPA Ratings:

Hazard Rating Scale				
0= Minimal	1=Slight	2= Moderate	3=Serious	4=Severe

Health: 1

Fire: 0

Reactivity: 0

Section 6: Accidental Release Measures

This section provides recommendations on the appropriate response to spills.

General:

Polystrand tape and laminates are in sheeted or rolled form, and accidental releases of material pose no health threat. Safe and effective material handling procedures should be evaluated.

Containment Procedures:

Avoid creating dusts; maintain a clean work environment.

Clean-up Procedures:

Sweep material into a convenient waste container. Clean up dusts and pulp with air filtered vacuum equipment or by wet cleaning.

Special Procedures: None.

Section 7: Handling and Storage

This section provides guidance on the safe handling practices and conditions for safe storage of materials.

Handling Procedures:

Avoid stepping on laminates as they pose a slip and fall hazard.

Sliding sheets across each other when un-stacking and unrolling of materials pose a potential static shock hazard.

Employ safe material handling processes.

When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.

Avoid creating dusts; maintain a clean work environment.

Unbanding material in roll form may result in spring back or recoil. Use Caution!

Avoid contact with molten material.

Storage:



Product Code "PETG Series" E-glass and Polyethylene resin system

Protect and store in a dry environment. There is potential for water absorption in the material. (< 1% by weight)

Store away from direct sunlight.

Section 8: Exposure Controls / Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures (PPE) that can be used to minimize worker exposure.

Exposure Limits:

ACGHI, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls:

Use materials with adequate ventilation to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal Protection:

Eyes / Face: Safety glasses or dust goggles when cutting or processing where dust may be present.

Skin: Sleeves and Gloves to protect from abrasion/cuts. Thermally insulated gloves (leather) are required when handling at high temperature.

Respiratory: Ventilation is normally required when handling this product at high temperatures.

Feet: Non-slip shoes

General: Eye wash fountain. Washing facilities.

Protective Equipment Symbols:



Safety Glasses



Gloves

Section 9: Physical and Chemical Properties

This section indicates the physical and chemical properties associated with the substance or mixture.

Physical Properties:

Appearance	Translucent to varied colors	Physical State	100% Solid
U/L flammability or explosive limits	NA	Melting Point / Freezing Point (NA)	249-271°C (480-520 °F) Resin 800 °C (>1472°F) Glass Fiber
Odor	None	Evaporation Rate	NA
Vapor Pressure	NA	Volatility	Negligible
Odor Threshold	NA	Partition coefficient	NA
Vapor density	NA	pH	ND
Auto ignition Temperature	ND	Decomposition Temperature	NA
Relative Density	PETG (1.28) Glass (2.65-2.7)	Viscosity	NA
Solubility (H ₂ O)	Insoluble	Flash Point	Avoid temperatures above 300 °C
Initial boiling point and range	NA	Flammability	Not an electrical conductor and may accumulate static charge.

NA – Not applicable ND-Not Disclosed or available

Section 10: Stability and Reactivity

This section describes the reactivity hazards of the material.

Stability:

The product is chemically stable.

Conditions to avoid:

None at ambient temperatures.

Avoid temperatures above 454 °C (570 °F) Minimum Ignition Temperature.

Materials to avoid:

None known

Hazardous decomposition products:

Fiberglass Carbon Monoxide, Carbon Dioxide.

Possibility of hazardous reactions:

Under normal conditions of storage and use, hazardous reactions will not occur.

Section 11: Toxicological Information

This section identifies toxicological and health effects information or indicates that such data is not available.

Acute toxicity: Not available

Chronic toxicity:

Polyethylene shows **very low toxicity** to humans or animals.

There are **no known health effects** from the long term use or contact with nonrespirable continuous filament fibers.

Nonrespirable fibers cannot reach the deep lung because they have a diameter greater than 3.5 micrometers.

Fibers of this diameter cannot penetrate the narrow bending passages of the human respiratory track 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. (ref. Glass Supplier SDS)

Epidemiology Studies: Two major studies in the US and Europe 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 to workers to fiberglass and respiratory cancer.

Carcinogenicity Classification:

PETG components are not listed as a carcinogen by OSHA, NTP or IARC.

Continuous filament glass is classified by the IARC = 3, Not listed as a carcinogen by NTP or OSHA.

Likely routes of exposure

Skin: Not available

Eyes: Not available

Respiratory: Not available

Sensitization

Skin: Not available

Respiratory: Not available

Target organs:

Contains material which may cause damage to the following organs:

Upper respiratory tract, skin, eyes.



Section 12: Ecological Information

This section provides information to evaluate the environmental impact if it were released to the environment.

Environmental effects:

- No known significant effects or critical hazards.
- Not readily biodegradable. 100% recyclable.
- Low mobility in soils.

Section 13: Disposal Considerations

This section provides guidance on proper disposal practices, recycling, and safe handling practices.

Waste Disposal:

- The generation of waste should be avoided or minimized whenever possible.
- Polystrand "PETG" products are 100% recyclable.

General:

- Dispose of surplus materials via a licensed waste disposal contractor. Disposal of this product 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.

Section 14: Transport Information

This section provides guidance on classification information for shipping and transporting of hazardous chemicals by road, air, rail, or sea.

DOT Classification:	Not a DOT controlled material
IMDG Classification:	Not applicable (Marine)
TDG Classification:	Not a DOT controlled material (Canada)
UN Number:	Not applicable
Shipping Name:	Not applicable
Packaging Group:	Not applicable

When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death.

Section 15: Regulatory Information

This section identifies the safety, health and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

HCS Classification: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

United States

SARA 302/304/311/312 extremely hazardous substances:	No products were found.
SARA 302/304 emergency planning and notification:	No products were found.
SARA 302/304/311/312 hazardous chemicals:	No products were found.

DSCL (EEC) This product is not classified according to the EU legislation.



Section 16: Other Information

This section indicates when the SDS was prepared with the last revision number. Changes to SDS are indicated with an explanation of the changes. Other useful information may be included.

Hazardous Material Information System (USA):

Health	0
Fire Hazard	1
Reactivity	0
Personal Protection	

National Fire Protection Association (USA):



Date of Previous MSDS: July 3, 2014

SDS prepared by: Polystrand Environmental Health and Safety
Validated on May 26, 2015 DV/CD

References:

- OSHA Brief; Hazard Communication Standard: Safety Data Sheets <https://www.osha.gov/Publications/OSHA3514.html>
- PETG Supplier SDS
- Fiber Glass Continuous Filament Supplier SDS
- Polystrand E-Glass PETG MSDS Rev. 7/3/14

The information contained in this data sheet is based on present scientific and technological knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by Polystrand, Inc. and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee, expressed or implied, is given in respect of the properties of the products. No liability can be accepted for any failure to observe precautionary measures described in this data sheet or for any misuse of the products.

The information herein is presented in good faith and is accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws.

END OF SAFETY DATA SHEET