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ROPE

1 1/2" Rope



Material Safety Data Sheet (MSDS)

Section 1: Identification of Substance

Fiber Glass Product Trade Names: Fiber Glass Product Descriptions:
 The products are bound fiber glass fiber strands which are:

- Chopped Strand** chopped to a specific length
- Hybon® Continuous Roving; Roving** wound onto a cylindrical forming package
- Continuous Strand** wound onto a cylindrical forming package
- Hybon® Woven Roving** woven to a heavy fabric
- Needled Mat for AZDEL, Inc.** formed into a mat
- MatVantage™ Continuous Strand Mat** formed into a mat
- Compmat® Woven Roving Mat** formed into a combination product consisting of a woven fabric ply and a chopped strand mat ply
- Chopped Strand Mat** chopped and formed into a mat
- Yarn** twisted onto a bobbin or wound onto a warp beam
- L.H.X.® Yarn** texturized and wound onto a tube
- TRXO® Yarn** texturized and wound onto a tube
- HercuFlex® Strand HF and HFO lines** coated with an off-white polymeric coating; also called impregnated yarn.

HercuFlex® is a registered trade mark of Hercules, Inc. licensed to PPG Industries

Chemical Name and Synonyms: Continuous Filament Fiber Glass (Fibrous Glass, Glass Fibers)
Chemical Formula: E-glass
Color: Yellow-white to white
Odor: No odor

Note: These products are not glass wool products (as used for home insulation materials). Consult the appropriate manufacturer of these materials for glass wool MSDS.

Section 2: Company Address

PPG Industries, Incorporated
 Fiber Glass Products
 One PPG Place
 Pittsburgh, Pennsylvania 15272

Phone/Fax Numbers

Emergency 24 hours/7 days per week: 304-843-1300
MSDS: 412-434-2272 (week days 8-4:30p.m. eastern time)
Other Information: 412-967-2047, Fiber Glass Research Ctr.
Fax: 412-967-2111, Research Ctr., Safety Department

Section 3: Composition of Ingredients

Ingredients	%-Weight	Exposure Control Limits
Fibrous Glass (E-type, continuous filament) Composition principally of oxides of silicon, aluminum, calcium, boron and magnesium, fused in an amorphous vitreous state	84.5 (Min.)	10mg/m ³ ACOH® TLVs® fiber glass 15mg/m ³ OSHA-PEL total nuisance dust 5mg/m ³ OSHA-PEL respirable nuisance dust
Surface Bindings (complex mixture, in general, of one or more starches ⁽¹⁾ , modified vegetable oils ⁽²⁾ , or polymers)	≤1.22 (see pg. 2)	
Surface Bindet (complex polymer mixture)	0-6	
Water	0-18	



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Section 2: Composition of Ingredients (continued)

Product Name	% Fibrous Glass	Surface Sizing	Surface Binder	Water
Hybon® Continuous Roving: Roving	99%	≤1%	---	---
Hybon® Woven Roving	≥99%	≤1%	---	---
MatVantage™ Continuous Strand Mat	≥95%	≤1%	≤4% (polyester)	---
Chopped Strand Mat	≥93%	≤1%	≤6% (polyester)	---
L.E.X.® Yarn	≥98%	≤2%	---	---
HercuFlex® Strand HF and HFO Lines	≥77%	≤1%	---	---

Section 3: Hazards Identification

Emergency Overview: Stable and nonflammable under normal industrial conditions.

Primary Route(s) of Entry: Inhalation.

Symptoms of Overexposure: Rash, itching, conjunctivitis, coughing, sneezing.

Immediate (Acute) Health Hazards: Mechanical skin, eye, nose & throat irritant. Typically, skin irritation experienced by most persons newly exposed to fiber glass.

Long Term (Chronic) Health Hazards: None currently known; see Section 11.

Section 4: First Aid Measures

Medical Conditions Aggravated by Exposure: None known.

Eye Contact: Flush eyes with water for at least 15 minutes - seek medical attention.

Skin Contact: Rinse contact areas with room temperature to cool water. Then wash gently with mild soap. If glass fiber becomes embedded, seek medical attention.

Inhalation: If irritation persists, seek medical attention. If swallowed, seek medical attention.

Section 5: Fire Fighting Measures

Flash Point, Flammable Limits, Extinguishing Media: Water is the preferred extinguishing media. Non-burning; except for MatVantage™ Mat and Needled Mat for AZDEL, Inc. which will support combustion and have Flash Points >200°F. Exposing both products to an ignition source will burn-off surface binder leaving a bare glass residual similar to the initial product.

Unusual Fire and Explosion Hazards: Not applicable except for Needled Mat for AZDEL, Inc. which has a surface binder containing an organic peroxide and may burn in the absence of oxygen.

Fire Fighting Procedures: In any sustained fire, wear self-contained breathing apparatus (SCBA). Every company should have written, NFPA & OSHA compliant, fire/evacuation policies including training for all facility employees.

Special Exposure Hazards From Fire: Hazardous decomposition products of combustion from sizing and binders may be released in a sustained fire. The larger part of the product is nonflammable E-glass. In a sustained fire, sizing and binders may decompose, releasing combustion products including carbon dioxide, carbon monoxide 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.

Section 6: Accidental Release Measures

Steps to be Taken upon Release or Spill: Use vacuuming or wet sweeping methods instead of dry sweeping.

Waste Disposal Method: Dispose in accordance with government regulations. Keep debris minimal by locating waste disposal equipment near work areas.

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Section 2: Handling and Storage

Precautions: Keep airborne dust concentrations below regulated levels. For optimum performance, store at 25°C or less and relative humidity less than 65%. Not an electrical conductor. Can accumulate static charge.

Section 3: Exposure Controls/Personal Protection

Respiratory Protection: Some applications of these products may not require respiratory protection for fiber glass. However, if airborne fibrous glass concentrations exceed regulatory limits, respiratory protection approved for nuisance dusts is recommended.

Ventilation: Local exhaust ventilation (if needed) to maintain appropriate airborne dust levels.

Skin/Eye Protection: 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. Wear appropriate eye protection which may be safety glasses/side shields if there is a chance of airborne glass fibers contacting eyes.

Exposure Limits: The American Conference of Governmental Hygienists (ACGIH) has adopted a Threshold Limit Value (TLV) of 10 mg/m³ for an 8 hour time weighted average (TWA) exposure for fibrous glass dust. The Occupational Safety and Health Administration (OSHA) does not prescribe a Permissible Exposure Limit (PEL) for fibrous glass but relies on the PEL-TWA's for nuisance dust of 15mg/m³ (total) and 5mg/m³ (respirable). Available air sampling/analytical methods: Gravimetric total dust NIOSH Sampling & Analytical Method 0500; the Gravimetric respirable dust NIOSH Method 0600 and the NIOSH 7400, B Fiber Counting Rules. The latter two methods may be performed as redundant verification that there are no respirable glass fibers.

Section 9: Stability and Reactivity

Stability:	Stable	Conditions to Avoid:	None known.
Incompatibility (Materials to Avoid):	None known.	Hazardous Polymerization:	Will not occur.

Section 10: Physical and Chemical Properties

Appearance/Odor: See Section 1.1	pH: Not applicable
Electrical Conductivity: E-glass is an electrical insulator.	Boiling/Freezing Points: Not applicable.
Specific Gravity (bare glass): 2.6 (Water=1)	Melting Point (softening): 800° C
Vapor Pressure/Density/Oxidation Risk: Not applicable	Octanol/Water Partition Coefficient: Not applicable.
Flash Point/Flammability/Explosion Limits: See Section 3.0	
Percent Volatile (volume): None.	
Solubility: Insoluble in water. For some applications (e.g. paper reinforcement) fibers are wetted and made water dispersible in some extent in organic solvents depending upon the application.	