

Safety Data Sheet

Section 1: Identification

Product Identification: **45 oz. PBI**

Manufacturers Identification:

John Tillman Co.
1300 W. Artesia Blvd.
Compton, CA 90220
800-255-5480

These, 45 oz. PBI, fabrics are a John Tillman Co. woven fabric of PBI and Aramid fiber blended over a fiberglass core yarn. Applications include safety clothing, gloves, mitts, jackets, and curtains.

Emergency Number: 800-255-5480

Last revised: 12/11/2014

Section 2: Hazard Identification

Emergency Overview:

Caution!

Causes eye irritation.

May cause respiratory irritation.

Causes digestive tract irritation if ingested.

Hazard: Irritant

Component	Wt%	CAS No.	ACGIH TLV (8hr TWA)	OSHA PEL (8hr TWA)
Fiberglass		65997-17-3		
Nonrespirable	>98%		5mg/m ³	15mg/m ³ total dust
Respirable	<1%		3mg/m ³ , PNOC	5mg/m ³ , respirable
Respirable particulate with fiber like dimensions (glass shards)	<0.002%		NE	1 fiber/cc; aspect Ratio >5:1
Vermiculite		110638-71-6		
Nonrespirable			10 mg/m ³	15 mg/m ³ , total dust
Respirable			3mg/m ³	5 mg/m ³
Quartz		014808-60-7		
Respirable			0.05 mg/m ³	0.1 mg/m ³

The fiberglass core is considered nonrespirable fibre. This means that it cannot reach deep lungs because the particles are larger than 3.5 micrometers.

Respirable Quartz (Crystalline silica) can result in lung disease. However, due to the physical nature of this product and low concentration of product exposures are not expected. Exposure rates can increase when an exorbitant amount of dust is produced during application.

Acute exposure:

Although the textile itself is not considered toxic or hazardous- dust from cutting and application may cause irritation to the respiratory tract and cause symptoms similar to bronchitis.

Primary Routes of Exposure: eye contact, skin contact and inhalation may cause temporary irritation.

Section 3: Composition and Information on Ingredients

<i>Ingredients</i>	<i>% w/w</i>	<i>CAS #</i>
Fiberglass	40-44%	65997-17-3
Sulfonated Polybenzimidazole (PBI)	20-30%	25765-47-3
Poly(terephthaloylchloride/p-phenylenediamine) (<i>para-aramid polymer</i>)	10-16%	26125-61-1
Vinyl Acetate Ethylene Based Finish	1-2%	
Vermiculite Dispersion	5-15%	110638-71-6
Quartz	.01-.5%	014808-60-7

Section 4: First-Aid Measures

Inhalation: If irritation occurs, move to fresh air

Skin Contact: If irritation occurs, wash with water and mild soap

Eye Contact: If irritation occurs, gently rinse the affected area with clean water for at least fifteen minutes

Ingestion: Not a probable route. However, in case of gastro-intestinal ingestion, rinse mouth with water and seek medical attention

If in any case irritation persists please seek medical assistance.

Section 5: Fire-fighting Measures

Suitable Extinguishing Media: dry chemical powder, foam, fog, carbon dioxide. Do not use direct water spray especially if fire began as an electrical fire.

Specific Hazards: not explosive. The product itself will not burn but its packaging may.

Flash point: n/a

Auto Ignition temp: n/a

Flammability limits: n/a

Special Protective Equipment: Self-containing breathing apparatus, protective clothing, gloves and a helmet.

NFPA Rating:

Health: 1

Flammability: 0

Reactivity: 0

Section 6: Accidental Release Measures

Personal Precaution: Do not breathe in fiber dust; use a respirator if there is a lot of dust.

Methods and Materials for Containment: Scoop up dust and fibre mechanically, ideally with a vacuum cleaner to avoid spreading it into the air. Also, avoid dust and fibre spillage into drains and sewers.

Section 7: Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes and skin. Wear suitable protective gear when cutting and working with the material. For large rolls use appropriate mechanical devices. Avoid breathing in dust. Handle in accordance with good industrial hygiene and safety practices.

Conditions for Safe Storage: Store in a cool, dry, well ventilated location

Section 8: Exposure Controls/ Personal Protection

Exposure Controls:

Component	Wt%	CAS No.	ACGIH TLV (8hr TWA)	OSHA PEL (8hr TWA)
Fiberglass		65997-17-3		
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Only process with adequate ventilation, and do not consume food, drink or tobacco in areas where they may become contaminated with this material.

Appropriate Engineering Controls: Ventilation- local exhaust ventilation should be provided as necessary to maintain exposures below occupational exposure limits.

Individual Protection Measures: The following precautions are advisable during cutting and fabrication or other operations that could generate dust while using this material.

Respiratory Protection: Protection may be desirable if dust is created in handling and should be required if the level of dust in the air exceeds occupational exposure limits regulated under OSHA regulations 29 CFR 190.134 use properly fitted NIOSH/MHSA approved dust respirator.

Eye protection:

Safety glasses, goggles, or face shields, as necessary.

Protective clothing:

wear loose fitting long sleeve shirt and pants to protect areas from exposure to dust. The use of barrier creams can, in some instances, be helpful.

Work and Hygiene Practices: Handle in accordance with good industrial hygiene and safety practices.

-remove dust and fibers from the skin after exposure. Be careful not to rub or scratch irritated areas which could force fibers into the skin. Fibers should be washed off.

-Use of barrier creams can, in some instances, be helpful.

-Use vacuum equipment to remove fibers and dust from clothing. Wash contaminated clothing separately and wipe out washer and sink in order to prevent loose fibers and dust from contaminating other laundry.

-Use vacuum equipment to clean up work surfaces.

Section 9: Physical and Chemical Properties

Appearance: Ochre plain weave style

Odor: none

Odor Threshold: n/a

pH: n/a

Melting/ Freezing Point: n/a

Initial Boiling Point: n/a

Flash Point: n/a

Evaporation: n/a

Flammability: none flammable

Upper/Lower Flammability: n/a

Vapor Pressure: n/a

Vapor Density: n/a

Relative Density: n/a

Solubility: insoluble in water

Partition coefficient: n/a

Auto-ignition Temp: n/a

Decomposition Temp: 400°C (750°F)

Viscosity: n/a

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions

Possibility of Hazardous Reaction: none reasonably foreseeable

Conditions to Avoid: Relatively long exposure to strong UV light can cause darkening in color and adversely affect strength of the fiber.

Incompatible Materials: Strong bases or acids can cause chemical decomposition (hydrolysis) of the molecules if exposed for an extended period of time which can release harmful byproducts.

Hazardous Decomposition Products: Thermal decomposition starting at temperatures above 750°F (400°C) may release toxic or hazardous products such as carbon oxides, nitrogen oxides, sulfur oxides, acrid smoke, organic compounds of low molecular weight and small amounts of hydrogen cyanide, ammonia, aldehydes, aliphatic hydrocarbons.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Exposure:

Inhalation: Acute LC₅₀ is unknown. Repeated inhalation of RFP can cause bronchitis like symptoms.

Skin: Dermal toxicity is unknown. Slight skin irritation has been observed in isolated cases. No chronic effects are known for this product.

Eyes: While this product has not been tested, it is expected that it would be minimally irritating to the eyes based on tests with similar products.

Ingestion: Oral LD₅₀ is not available for this product. There are no known chronic effects.

Acute Toxicity: n/a

Carcinogenicity:

<i>Ingredient</i>	<i>IARC Group 1</i>	<i>IARC Group 2A</i>	<i>IARC Group 2B</i>	<i>NTP Known</i>	<i>NTP Suspect</i>	<i>OSHA</i>
Vermiculite Dispersion	No	No	No	No	No	No
Quartz	Yes	No	No	Yes	No	Yes

Mutagenicity: N/A
Teratogenicity: N/A
Reproductive Toxicity: N/A

John Tillman Co. 800 Series products are believed to be safe for their intended use. Each of the synthetic fibers in the blend has been evaluated for health hazards by the manufacturer of the fiber. Their information indicates that the fibers are not toxic or irritating based on animal and some human skin test data.

In June 1987, the international Agency for Research on Cancer (IARC) categorized fiberglass continuous filaments as not classifiable with respect to human carcinogenicity. The evidence from human, as well as animal studies was evaluated by IARC as insufficient to classify fiberglass continuous filaments as possible, probable, or confirmed cancer causing material.

One of the concerns that people still have about fiberglass and cancer are studies such as the 1997 study from the Institute of Occupational Medicine (IOM) in Edinburgh, Scotland. This study found that animals exposed to an extremely high dose of a durable E-glass microfiber, with average diameters less than 1 micron, developed lung scarring and tumors, including cancer of the lining of the lungs (mesothelioma). The IOM Study results are consistent with previous published research indicating that high doses of durable, fine diameter fibers can cause disease in experiment animals.

Although our continuous filaments are an E-glass, they are not the same as the micro-fibers tested in this study. The exposure of durable E-glass microfiber, with an average diameter of less than 1 micron would not be significant in using and processing this product.

This product's coating uses chemically delaminated vermiculite dispersed in 80-95% water. The vermiculite used in this product is a naturally-occurring mineral mined in South Carolina which contains tremolite in the ore body. Except for trace amounts, the tremolite, which is predominately non-fibrous, is removed from the vermiculite during processing. In an effort to assure that this product is high purity, the supplier has retained the services of an outside independent laboratory. This lab has analyzed samples using an electron microscope. Using this technique, no fibrous tremolite has been detected.

Quartz is a naturally occurring mineral that is commonly contained in materials that are mined from the earth's surface such as sand, limestone, clay and gypsum (calcium sulfate). Total quartz is a value usually representing the combined fraction of large non-respirable sized particles and of respirable sized particles (less than ten micros in aerodynamic diameter). It is only the respirable sized fraction of total quartz that is recognized as hazardous by professionals in the field of Occupational Health and by most regulatory agencies.

In addition, a wet sieving analysis combined with x-ray diffractometry has been conducted. Results indicate that respirable quartz is not present above the 0.1% by weight limit established by OSHA for carcinogens and in fact is below the limits of detection for the analysis. OSHA states that is the hazardous substance is contained in the product below 0.1% by weight and if the exposures do not exceed permissible exposure limits then the hazards do not apply.

Section 12: Ecological Information

Ecotoxicity: n/a

Persistence and Degradability: n/a

Bioaccumulative potential: n/a

Mobility in Soil: n/a

This product is not considered harmful to aquatic organisms nor to cause long-term adverse effects to the environment.

Section 13: Disposal Considerations

Disposal should be in accordance with relevant national and local regulations pertaining to the disposal of non-hazardous waste. Do not dump dust particles into sewers or anybody of water. According to EPA (CFR 261) waste of this product is not defined as hazardous.

Section 14: Transport Information

UN Number: n/a

Shipping Information: Not regulated for transport.

All information and recommendations are presented in good faith and are believed to be correct but no warranty, expressed or implied is made. All materials should be handled with reasonable caution.