SAFETY DATA SHEET
FortiThix Fibers

Product Name	FortiThix Fibers		
Revision Number	1	Revision Date	07 June 2022
		Issue Date	27 May 2022

SECTION 1. IDENTIFICATION

Product Name	
Product Code	PEFYB
Grades	ESS-series, E-series, AU-series
Synonyms	Polyethylene, High Density Polyethylene, HDPE, PE

Recommended Use	Uses vary
Restrictions on Use	None known

COMPANY IDENTIFICATION

MiniFIBERS, Inc.
2923 Boones Creek Rd
Johnson City, TN 37615
(423) 282-4242

TRANSPORTATION EMERGENCY PHONE NUMBERS

423-282-4242

SECTION 2. HAZARD IDENTIFICATION

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910.1200

Combustible Dust

LABEL ELEMENTS

Signal Word	Warning
Hazard Statement(s)	May form combustible dust concentrations in air
Precautionary Statement(s)	Prevent dust accumulation to minimize explosion hazard. Material can accumulate static charges which may cause ignition. Keep away from heat/sparks/open flames/hot surfaces. Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practices
Pictogram	No pictogram

OTHER HAZARDS

Hazard Not Otherwise Classified (HNOC): None as defined under Federal OSHA Hazard Communication Standard (29CFR 1910.1200)

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS #	Concentration (%w/w)
Polyethylene	Ethylene, homopolymer	9002-88-4	>98%
Water	Water	7732-18-5	<2%

NOTES
None

SECTION 4. FIRST AID MEASURES

GENERAL INFORMATION
No hazards which require special first aid measures

Inhalation	Move to fresh air. If symptoms persist, contact physician.
Skin contact	Wash off with soap and water. If symptoms persist, contact physician.
Eye contact	In case of contact with eyes, remove contact lens if present, rinse immediately with plenty of water and seek medical advice.
Ingestion	Wash out mouth with water. Seek medical attention
Most important symptoms and effects (acute and delayed)	Dust may irritate the respiratory tract, skin and eyes. May cause allergic skin disorders in sensitive individuals.
Note to physician	Treat symptomatically

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. Water fog. Dry chemical. Foam. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dusts.
Unsuitable extinguishing media	Do not use water jet as an extinguisher
Specific hazards during fire fighting	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in presence of an ignition source is a potential dust explosion hazard. Molten polymer tends to flow or drip and may propagate fire.
Hazardous combustion products	May consist of carbon monoxide and/or carbon dioxide gases. Degradation products may include trace amounts of acrolein, formaldehyde, aldehydes, and other organic vapors.
Further information	Minimize dust generation and accumulation

Special protective equipment	Wear approved positive pressure self-contained breathing apparatus in addition to standard firefighting gear

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, emergency procedures	Keep unnecessary personnel away. Use only non-sparking tools. Dust deposits should not be allowed on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Dust mask and goggles are recommended to prevent possible irritation from airborne fibers.
Environmental precautions	Avoid releases to the environment
Methods and materials for containment and clean-up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Vacuum or sweep up and place in a standard disposal container. Minimize dust generation.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling	Minimize dust generation and accumulation. Keep away from heat and sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity when subjected to friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Advice on safe handling	Wash thoroughly after handling Use only in areas provided with ventilation Minimize dust generation and accumulation
Conditions for safe storage	Keep containers tightly closed in a dry, cool, and well-ventilated space. Do not store near highly flammable materials; avoid proximity or contact with flames or sparks. Do not store with the following product types: strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS WITH WORKPLACE CONTROL PARAMETERS

US OSHA	**Type**	**Value**	**Form**
Polyethylene	TWA	5 mg/m3 15 mg/m3	Respirable fraction Total dust

ACGIH	**Type**	**Value**	**Form**
Dust	TWA	10 mg/m3	Inhalable particles

ACGIH TLV	**Type**	**Value**	**Form**
Dust	TWA	3 mg/m3	Respirable particles

Notes: Limits/standards shown for guidance only. Follow applicable regulations.

Engineering Measures	Good general ventilation should be used. Ventilation rates should match to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Maintain airborne levels to acceptable level.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection	If engineering controls do not maintain airborne concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.
Eye protection	Wear safety glasses (with side shields). If there is a potential for exposure to particles which could cause eye discomfort, wear goggles.
Hand protection	No special requirements
Skin and body protection	Wear suitable protective clothing
Protective measures	Ensure eye flushing systems and safety showers are located close to the working spaces.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Practice good housekeeping.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTIES BASED ON SUPPLIER SDS OR OTHER KNOWLEDGE

Appearance	Soft, flexible, white and fluffy
Odor	No significant odor
Odor threshold	No data available
pH	Not applicable
Melting point/range	E and ESS series: ~135°C/~275°F AU series: ~125°C/~257°F
Flash point	>200°C/>392°F
Evaporation rate	Not applicable
Flammability (solid, gas)	May form combustible dust concentrations in air during processing, handling or other means
Upper flammability/upper explosion limit	Not applicable
Lower flammability/lower explosion limit	Not applicable
Vapor pressure	Not applicable
Relative vapor density (air = 1)	Not applicable
Relative density g/cm^3 (water = 1)	0.96 except AU series 0.92-0.93
Water solubility	Insoluble
Partition coefficient: n-octanol/water	Insoluble
Auto-ignition temperature	>340°C / >644°F
Decomposition temperature*	>300°C / >572°F
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

*No testing has been performed on the material. Data obtained from supplier datasheets or other available data, including Tsuchiay, Yoshio and Sumi, Kikuo (1968), *Thermal decomposition of products of polyethylene*, Journal of Polymer Science, Part A-1, Vol 6, 415-424

SECTION 10. STABILITY AND REACTIVITY

Reactivity	This product is stable and non-reactive under normal conditions of use, storage, and transportation.
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Minimize dust generation and accumulation Avoid hot surfaces, sparks, open flames, other ignition sources, and heating to temperatures above >300°C/>572°F as pyrolysis can take place,
Incompatible materials	Strong acids, bases, and oxidizing materials

Hazardous decomposition products	Decomposition not expected under normal conditions. For hazardous combustion products see Section 5

SECTION 11. TOXICOLOGY INFORMATION

PROPERTIES BASED ON SUPPLIER SDS OR OTHER KNOWLEDGE

INFORMATION ON LIKELY ROUTES OF EXPOSURE

Product	
Inhalation	Remarks: Fibers or fiber dust may irritate respiratory system
Skin contact	Remarks: Dust or powder may irritate the skin
Eye contact	Remarks: Fibers or fiber dust may irritate eyes
Ingestion	Remarks: No specific data

ACUTE TOXICITY

Acute oral toxicity*	Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking of swallowed. As product: Ethene, homopolymer: LD50 Oral – Rat – 8g/kg
Acute inhalation toxicity*	No adverse effects are anticipated from single exposure to dust. As product LC50 has not be determined
Acute dermal toxicity*	No adverse effects anticipated from skin absorption. As product: Single dose LD50 has not been determined Typical for this family of materials. LD50, Rabbit, >2g/kg estimated

*No testing has been performed by Minifibers. Data from supplier or other publicly available datasheets.

Notes: According to hypothesis of Stanton-Pott, it is reported that there is a possibility of causing cancer when ultra-fine particles below 0.25μm in diameter and below 8μm in length are absorbed into the lung. When observed with the electronic microscope, the diameter of these particles was about 1μm, and the average length was over 100μm; therefore the values were higher than those provided in the hypothesis.

SKIN CORROSION/IRRITATION

Remarks	Prolonged skin contact may cause temporary irritation

SERIOUS EYE DAMAGE/EYE IRRITATION

Remarks	Direct contact with eyes may cause temporary irritation

RESPIRATORY SENSITIZATION

Remarks	No data available

SKIN SENSITIZATION

Remarks	No data available

STOT (SINGLE EXPOSURE)

Remarks	No data available

STOT (REPEAT EXPOSURE)

Remarks	No data available

ASPIRATION TOXICITY

Remarks	No data available

CARCINOGENICITY

Remarks	
IARC	3 – Not classified as carcinogen to humans. No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens
NTP	No ingredient on this product present at levels greater than or equal to 0.01% is identified as a known or anticipated carcinogen by NTP

REPRODUCTIVE TOXICITY

Remarks	No relevant data found

MUTAGENICITY

Remarks	No relevant data found

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

GENERAL INFORMATION

No known evidence of adverse effects on the environment.

ECOTOXICITY
No data available

PERSISTENCE AND DEGRADABILITY
No data available

BIOACCUMULATIVE POTENTIAL
No bioconcentration is expected because of relatively high molecular weight (MW>1000)

MOBILITY IN SOIL
Product is insoluable in water

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Waste from residues	DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. Dispose of in accordance with federal, state, and local regulations. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

SECTION 14. TRANSPORTATION INFORMATION

DOT	Not regulated as a dangerous good
IMO-IMDG Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not regulated as a dangerous good Note: Consult IMO regulations before transporting ocean bulk
ICAO/IATA	Not regulated as a dangerous good

This information is not intended to convey all specific regulator or operational requirements/information related to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of this material.

SECTION 15. REGULATORY INFORMATION

U.S. AND INTERNATIONAL REGULATIONS FOR THIS SECTION TO BE BASED ON SUPPLIER SDS OF THE FIBER

U.S. STATE REGULATIONS

Regulation California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):	Does not contain chemicals known to the State of California to cause cancer or reproductive toxicity. For more information go to www.P65Warnings.ca.gov

U.S. FEDERAL REGULATIONS

20 CFR 1910.1200	This product is an article and, as such, is not subject to the OSHA Hazard Communication Standard.
TSCA	This product is considered an article and is not subject to TSCA requirements All components of this product are in compliance with the inventory listing requirements of the U.S
SARA 302 Extremely hazardous substance	Not listed
SARA 311/312 Hazardous chemical	Yes Classified hazard categories: Combustible dust
SARA 313 (TRI Reporting)	This product does not contain any components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

INTERNATIONAL REGULATIONS

REACH	According to Article 3(3) fibers can be defined as articles not requiring registration
Canada DSL/NDSL	All components are listed or exempt

HTS CODE:

Commodity: Polyethylene pulp
HTS Code Number: 3901.20
NMFC Item Number: 68310 Sub 6

SECTION 16. OTHER INFORMATION

OTHER INFORMATION

Refer to NFPA 654. Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

FULL TEXT OF OTHER ABBREVIATIONS

Add any additional abbreviations and text to table based on content

Product Name	FortiThix Fibers		
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DOT	US Department of Transportation
DSL/NDSL	Domestic Substance List/Non-Domestic Substance List
GHS	Global Harmonized System
HTS	Harmonized Tariff Schedule
IARC	International Agency for the Research of Cancer
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
MARPOL	International Convention for the Prevention of Pollution from Ships
NTP	National Toxicology Program
OSHA	US Safety and Health Act
REACH	Regulation (ECO) No 1907/2006 of the European Parliament and the Council covering the Registration, Evaluation, Authorization and Restriction of Chemicals
SARA	Superfund Amendment and Reauthorization Act
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TSCA	US Toxic Substance Control Act

REVISION DATE

06-07-2022

INFORMATION SOURCE AND REFERENCES

This SDS is based on information provided by suppliers, publicly available data and internal references within our company.

Information related to REACH and articles: ECHA. (2017). Guidance on requirements for substances in articles. Version 4. Link

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of this publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered warranty or quality specification. The information relates only to the specified material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.