

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

SECTION 1. IDENTIFICATION

| | |
|---------------------|-------------------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers |
| Product Code | NFFLX |
| Synonyms | Flax fibers |
| Recommended Use | Various commercial uses |
| 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) |
|---------------|---------------------|-------|----------------------|
| N/A | Flax Natural Fibers | n/a | 100% |

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

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 (CO ₂). 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. |
| Hazardous combustion products | May consist of carbon monoxide and/or carbon dioxide gases |
| 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 |

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

| | |
|--|--|
| 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. |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS WITH WORKPLACE CONTROL PARAMETERS

| US OSHA | Type | Value | Form |
|-----------|------|---|-----------------------------------|
| Dust | TWA | 5 mg/m ³ 15 mg/m ³ | Respirable fraction Total dust |
| ACGIH | Type | Value | Form |
| Dust | TWA | 10 mg/m ³ | Inhalable particles |
| ACGIH TLV | Type | Value | Form |
| Dust | TWA | 3 mg/m ³ | Respirable particles |

Notes: Fiber dust should be considered a nuisance dust. 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

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

| | |
|--------------------------------|---|
| 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 | Natural |
| Odor | No significant odor |
| Odor threshold | No data available |
| pH | Not applicable |
| Melting point/range | Not applicable |
| Flash point | Not available |
| 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) | Not available |
| Water solubility | Negligible |
| Partition coefficient: n-octanol/water | No data available |
| Auto-ignition temperature | No data available |
| Decomposition temperature | Not available |
| Viscosity | No data available |
| Explosive properties | No data available |
| Oxidizing properties | No data available |

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

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 | None known |
| Hazardous decomposition products | 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: Single dose LD50 has not been determined |
| 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 |

SKIN CORROSION/IRRITATION

| | |
|---------|---|
| Remarks | Prolonged skin contact may cause temporary irritation |
|---------|---|

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

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.

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

ECOTOXICITY

No data available

PERSISTENCE AND DEGRADABILITY

No data available

BIOACCUMULATIVE POTENTIAL

No data available

MOBILITY IN SOIL

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

| | |
|---------------------|---|
| Waste from residues | <p>DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.</p> <p>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.</p> |
|---------------------|---|

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.

NMFC INFORMATION:

Commodity: Natural Fibers

Item Number: 68310

SECTION 15. REGULATORY INFORMATION

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

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

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

| | |
|---|---|
| TSCA | This product is considered an article and is not subject to TSCA requirements |
| 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 | unknown |

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.

E2Eco® is a registered trademark of MiniFibers, Inc.

FULL TEXT OF OTHER ABBREVIATIONS

Add any additional abbreviations and text to table based on content

| | |
|----------|---|
| 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 |

| | | | |
|-----------------|-------------------------------|---------------|-------------------|
| Product Name | MiniFIBERS E2Eco™ Flax Fibers | | |
| Revision Number | 5 | Revision Date | 1 May 2025 |
| | | Issue Date | 08 September 2021 |

| | |
|-------|--|
| 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

05-31-2022

07-20-2023 modified list of natural fibers

10-19-2023 modified trademark

07-24-2024 Section 15: Removed reference to 21 CFR 1910.1200, Clarified Canadian DSL

05-01-2025 moved NMFC info to Section 14; added registered trademark info

INFORMATION SOURCE AND REFERENCES

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

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

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.