

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

SECTION 1. IDENTIFICATION

| | |
|--------------|---|
| Product Name | MiniFIBERS LO-BOND® Polyethylene Low Melt Yarn, Polyethylene Low Melt Yarn |
| Product Code | LLDPE |
| Synonyms | Polyethylene, Linear Low Density Polyethylene, Polyolefin |

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

Not classified

LABEL ELEMENTS

| | |
|----------------------------|--|
| Signal Word | No signal word |
| Hazard Statement(s) | No known significant effects or critical hazards |
| Precautionary Statement(s) | Not applicable |
| 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, LLDPE | 1-Butene, Polymer with Ethene | 25087-34-7 | >98% |

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

NOTES

No other components of this product require reporting according to OSHA Hazard Communication Standard 2012.

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) | May cause allergic skin disorders in sensitive individuals. |
| Note to physician | Treat symptomatically |

SECTION 5. FIREFIGHTING MEASURES

| | |
|---------------------------------------|---|
| Suitable extinguishing media | Water fog. Dry chemical. Foam. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dusts. |
| Unsuitable extinguishing media | None known |
| Specific hazards during fire fighting | No specific fire or explosion hazard |
| 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 | None |
| 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. Wear appropriate personal protective gear. |
| Environmental precautions | Avoid releases to the environment |
| Methods and materials for containment and clean-up | Vacuum or sweep up and place in a standard disposal container. |

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

SECTION 7. HANDLING AND STORAGE

| | |
|-------------------------------|--|
| Precautions for safe handling | Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Wear appropriate personal protective equipment. See Section 8. |
| Advice on safe handling | Wash thoroughly after handling |
| Conditions for safe storage | Keep containers tightly closed in a dry, cool, and well-ventilated space. Do not store with the following product types: strong oxidizing agents |

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS WITH WORKPLACE CONTROL PARAMETERS

None

OCCUPATIONAL EXPOSURE LIMITS

None

| | |
|----------------------|---|
| 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 or risk assessment, 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 |

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

| | |
|--|--|
| | and protective equipment to remove contaminants. Practice good housekeeping. |
|--|--|

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTIES BASED ON SUPPLIER SDS OR OTHER KNOWLEDGE

| | |
|--|---------------------------|
| Appearance | White or Off-white Fibers |
| Odor | No significant odor |
| Odor threshold | No data available |
| pH | Not applicable |
| Melting point/range | 114-135°C / 252-272°F |
| Flash point | >200°C/>392°F |
| Evaporation rate | Not applicable |
| Flammability (solid, gas) | Not applicable |
| 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) | 0.91 – 0.94 |
| 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 Tsuchiy, 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 | Avoid hot surfaces, sparks, open flames, other ignition sources, and heating to temperatures above >300°C/>572°F as pyrolysis can take place, |

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

| | |
|----------------------------------|---|
| 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* | <p>Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. May cause choking of swallowed.</p> <p>Single dose LD50 for this product not determined.</p> <p>Typical for this family of materials. 1-Butene, polymer with ethene: LD50 Oral – Rate – 4g/kg</p> |
| Acute inhalation toxicity* | <p>No adverse effects are anticipated from single exposure to dust.</p> <p>As product LC50 has not be determined</p> |
| Acute dermal toxicity* | <p>No adverse effects anticipated from skin absorption.</p> <p>As product: Single dose LD50 has not been determined</p> <p>Typical for this family of materials. LD50, Rabbit, >2g/kg estimated</p> |

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

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

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

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

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

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 insoluble in water

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 | Not regulated as a dangerous good |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | 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.

HTS INFORMATION:

Commodity: Polyethylene Multifilament Yarn, Untwisted
Harmonized Code: 5402.49

HTS INFORMATION:

Commodity: Yarn NOI
NMFC Item Number: 200420 Sub 3

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

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): | This product contains no chemicals known to the State of California to cause cancer or reproductive toxicity in levels greater than 0.1%. 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 | All components are listed |

SECTION 16. OTHER INFORMATION

OTHER INFORMATION

LO-BOND® 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 |

| | | | |
|-----------------|--|---------------|--------------|
| Product Name | MiniFIBERS LO-BOND® Low Melt Yarn, Polyethylene Low Melt Yarn | | |
| Revision Number | 4 | Revision Date | 1 May 2025 |
| | | Issue Date | 18 June 2023 |

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

01-29-2024 new tradename

07-09-2024 updated Section 15 Canadian DLS statement

01-27-2025 Add registered trademark symbol; move HTS and NMC info to Section 14; update NMFC item number

05-01-2025 add registered trademark statement

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.