

MOUNTAIN FIBER LOOSEFILL™

SAFETY DATA SHEET

EFFECTIVE DATE: January 1, 2025



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MOUNTAIN FIBER LOOSEFILL™
CHEMICAL NAME/SYNONYM: Cellulose insulation with sodium polyborate
MANUFACTURER: Mountain Fiber Insulation, Inc.
ADDRESS: P.O. Box 337
Hyrum, UT 84319
EMERGENCY PHONE: (435) 245-6081
RECOMMENDED USE: Insulation

MOUNTAIN FIBER LOOSEFILL™ is a registered trademark of Mountain Fiber Insulation, Inc.

SECTION 2: HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION: Eye Irritation Hazard Category 2B

SIGNAL WORD: Warning

HAZARD STATEMENTS: Causes eye irritation

PRECAUTIONARY STATEMENTS: Wash hands thoroughly after handling. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, seek medical attention.

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION: None.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	% WT
Cellulose fiber	65996-91-4	82%
Boric Acid	10043-35-3	18%

SECTION 4: FIRST AID MEASURES

EYES: Use eye wash fountain or fresh water to cleanse eye. If irritation persists for more than 30 minutes, seek medical attention.

SKIN: No treatment necessary because non-irritating.

INGESTION: Swallowing small quantities (less than one teaspoon) will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

INHALATION: No specific treatment is necessary since the product is not likely to be hazardous by inhalation. Prolonged exposure to dust levels in excess of regulatory limits should always be avoided.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: Observation only is required for adult ingestion of a few grams of the product. For ingestion in excess of larger amounts, maintain adequate kidney function and force fluids. Gastric lavage is recommended for symptomatic patients only. Hemodialysis should be reserved for massive acute ingestion or patients with renal failure. Boron analyses of urine or blood are only useful for documenting exposure and should not be used to evaluate severity of poisoning or to guide treatment.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA: Use extinguishing media that are appropriate to local circumstances and the surrounding environment.

SPECIAL FIRE FIGHTING PROCEDURES: Not applicable. The product itself is a flame retardant.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None. The product is not flammable, combustible or explosive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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GENERAL: The product contains water-soluble salts that may cause damage to trees or vegetation by root absorption. Avoid contamination of water bodies.

LAND SPILL: Vacuum, shovel or sweep up and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. No personal protective equipment is needed to clean up land spills.

WATER SPILL: The product will cause localized contamination of surrounding waters depending on the quantity dissolved in these waters. At high concentrations some damage to local vegetation, fish and other aquatic life may be expected. The product is a non-hazardous waste when spilled or disposed of, as defined in the Resource Conservation and Recovery Act (RCRA) regulations (40 CFR 261). (Refer to Regulatory Information for additional references and information regarding EPA and California regulations.)

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Good housekeeping procedures should be followed to minimize dust generation and accumulation. Avoid spills. Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES: No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity, bags should be handled on a "first-in first-out" basis.

Storage temperature:	Ambient
Storage pressure:	Atmospheric
Special sensitivity:	None known

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

OSHA PEL-TWA: 15 mg/m³ total dust and 5 mg/m³ respirable dust

ACGIH TLV-TWA-OEL: 2 mg/m³ inhalable particles

ACGIH STEL: 6 mg/m³

Cal OSHA PEL-TWA: 10 mg/m³ total dust

ENGINEERING CONTROLS AND VENTILATION: Use local exhaust ventilation to keep airborne concentrations of cellulose insulation dust below permissible exposure limits.

RESPIRATORY PROTECTION: Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators must be used.

EYE PROTECTION: Eye protection according to ANSI Z.87.1 or other national standards may be warranted if environment is excessively dusty.

SKIN PROTECTION: Standard work gloves (cotton, canvas or leather) may be warranted if environment is excessively dusty.

SECTION 8 NOTES: PEL: Permissible Exposure Limit, TLV: Threshold Limit Value, TWA: Time Weighted Average, STE: Short Term Exposure Limit

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Gray fiber

ODOR: Odorless

ODOR THRESHOLD: Not applicable

pH AT 25±C: 7.2 (2.0% solution)

MELTING POINT/ FREEZING POINT: Not applicable

BOILING POINT AND BOILING RANGE: Not applicable

FLASH POINT: Not applicable; non-volatile

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EVAPORATION RATE: not applicable; non-volatile

FLAMMABILITY: Non-flammable; used as a flame retardant

UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Not applicable; non-flammable

VAPOR PRESSURE: Negligible at 20°C

VAPOR DENSITY: Not applicable

RELATIVE DENSITY: 0.7 compressed

SOLUBILITY IN WATER: Fiber is not soluble; chemical additive is soluble at a rate of 7.46% at 25°C

AUTO-IGNITION TEMPERATURE: Not applicable; not self-heating

DECOMPOSITION TEMPERATURE: Not applicable

VISCOSITY: Not applicable; solid substance

EXPLOSIVE PROPERTIES: Not explosive; does not contain chemical groups associated with explosive properties

OXIDIZING PROPERTIES: Not oxidizing; does not contain chemical groups associated with oxidizing properties

MOLECULAR WEIGHT: Not applicable

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: None known.

STABILITY: MOUNTAIN FIBER LOOSEFILL™ is stable and does not change under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard.

CONDITIONS TO AVOID: Avoid contact with strong reducing agents by storing according to good industrial practice.

INCOMPATIBLE MATERIALS: Strong reducing agents.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None.

SECTION 11: TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because product is poorly absorbed through intact skin. MOUNTAIN FIBER LOOSEFILL™ is not intended for ingestion.

SYMPTOMS RELATED TO THE PHYSICAL, AND CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS: Small amounts (e.g. a teaspoonful) swallowed accidentally are not likely to cause effects; swallowing larger amounts may cause gastrointestinal symptoms.

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE: Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to inorganic borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to the general population with high exposures to borates in the environment.

ACUTE TOXICITY:

Cellulose:

Oral LD₅₀ (rat): >5,000 mg/kg of body weight

Dermal LD₅₀ (rabbit): >2,000 mg/kg of body weight

Inhalation LC₅₀ (rat): >5.8 mg/L

Dermal irritation/corrosivity: Nonirritating, nonsensitizing

Eye irritation: No information found.

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Sodium polyborate:

Oral LD₅₀ (rat): 3,479 mg/kg of body weight

Dermal LD₅₀ (rabbit): >2000 mg/kg of body weight

Inhalation LC₅₀ (rat): >5.8 mg/L

Dermal irritation/corrosivity: 0 (Zero), sodium polyborate is non-corrosive

Eye irritation: Draize test in rabbits produced mild eye irritation effects. Many years of occupational exposure history reflects no indication of human eye injury from exposure to sodium polyborate.

CHRONIC HEALTH HAZARDS: No chronic effects from **MOUNTAIN FIBER LOOSEFILL™** or with sodium polyborate were found in the literature. Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to inorganic borates and sodium borate dust.

REPRODUCTIVE EFFECTS: No reproductive effects from **MOUNTAIN FIBER LOOSEFILL™** or sodium polyborate were found in the literature.

CARCINOGENICITY: **MOUNTAIN FIBER LOOSEFILL™** is not listed as known or suspected carcinogen by OSHA, ACGIH, NTP, or IARC.

NOTES: Although it is not possible to test the mixture due to the low toxicity and concentration of the sodium polyborate, the estimated toxicity of a mixture of 15% or 23% is presented here. This can be estimated using the following formula: LD50 of ingredient in mg/kg / percentage in mixture = LD50 of mixture (e.g., oral LD50 of sodium polyborate is 3,479 mg/kg, therefore 3,479 mg/kg / 0.23 = 15,126 mg/kg).

Estimated acute toxicity of cellulose with 15% sodium polyborate concentration in final product:

Oral LD50 (rat): 23,193 mg/kg of body weight

Dermal LD50 (rabbit): >13,333 mg/kg of body weight

Inhalation LC50 (rat): >39 mg/L

Estimated acute toxicity of cellulose with 23% sodium polyborate concentration in final product:

Oral LD50 (rat): 15,126 mg/kg of body weight

Dermal LD50 (rabbit): >8,696 mg/kg of body weight

Inhalation LC50 (rat): >25 mg/L

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL, WHERE AVAILABLE):

Cellulose: No information found.

Boron: No information specific to sodium polyborate was found in the literature. The following information is based on other boron compounds and normalized for boron.

LC₅₀ (Water flea, *D. magna*): 101.2 mg/L (48-hr)

NOEC (Water flea, *D. magna*): 5.7 mg/L (21-d)

LC₅₀ (Rainbow trout, *O. mykiss*): 351.7 mg boron/L (96-hr)

LC₅₀ (Bluegill, *L. macrochirus*): 4.6 mg boron/L (24-hr)

PHYTOTOXICITY: Boron is an essential micronutrient for healthy growth of plants. It can be harmful to boron sensitive plants in higher quantities. Care should be taken to minimize the amount of borate product released to the environment.

PERSISTENCE AND DEGRADABILITY: Biodegradation is not an applicable endpoint since the product is an inorganic substance.

BIOACCUMULATIVE POTENTIAL: This product will undergo hydrolysis in water to form non-dissociated boric acid. Boric acid will not bio magnify through the food chain. Octanol/Water partition coefficient: Log Pow = -0.7570 @ 25°C (based on boric acid).

MOBILITY IN SOIL: The product is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant.

OTHER EFFECTS: None

SECTION 12 NOTES: The information in this section is based on other borates and is normalized to boron content. Boron is the element in sodium polyborate which is used to characterize borate product ecological effects.

SECTION 13: DISPOSAL CONSIDERATIONS

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WASTE DISPOSAL METHOD: Small quantities of **MOUNTAIN FIBER LOOSEFILL™** can usually be disposed of at municipal landfill sites. No special disposal treatment is required, but refer to state and local regulations for applicable site-specific requirements. Tonnage quantities of **MOUNTAIN FIBER LOOSEFILL™** are not recommended to be sent to landfills. Such product should, if possible, be re-used for an appropriate application. **MOUNTAIN FIBER LOOSEFILL™** packaging should be recycled where possible. Avoid spillage into water and cover drains.

RCRA HAZARD CLASS: **MOUNTAIN FIBER LOOSEFILL™** is not listed under any section of the Federal Resource Conservation and Recovery Act (RCRA).

CALIFORNIA HAZARDOUS WASTE DESIGNATION: California identifies substances with acute oral, acute dermal, or acute inhalation LD₅₀s less than 2,500, 4,300, or 10,000 mg/kg, respectively as "hazardous wastes." Additionally, the aquatic LC₅₀ is less than 500 mg/L, the chemical is considered a "hazardous waste." **MOUNTAIN FIBER LOOSEFILL™** is therefore a "hazardous waste" if spilled in California, and should be handled in accordance with applicable state regulations. Refer to Regulatory Information for additional information.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: **MOUNTAIN FIBER LOOSEFILL™** is not a US Department of Transportation (DOT) Hazardous Material or Hazardous Substance.

OTHER AGENCIES: **MOUNTAIN FIBER LOOSEFILL™** has no UN Number and is not regulated under international rail, highway, water, or air transport regulations.

SECTION 15: REGULATORY INFORMATION

TSCA NO.: **MOUNTAIN FIBER LOOSEFILL™** does not appear on the EPA TSCA inventory list.

RCRA: **MOUNTAIN FIBER LOOSEFILL™** is not listed as a hazardous waste under any sections of the Resource Conservation and Recovery Act or regulations (40) CFR 261 et seq.).

SUPERFUND: CERCLA/SARA. **MOUNTAIN FIBER LOOSEFILL™** is not listed under CERCLA (the Comprehensive Environmental Response Compensation and Liability Act) or its 1986 amendments, SARA, (the Superfund Amendments and Reauthorization Act), including substances listed under Section 313 of SARA, Toxic Chemicals, 42 USC 11023, 40 CFR 372.65; Section 302 of SARA, Extremely Hazardous Substances, 42 USC 11002, 40 CFR 355; or the CERCLA Hazardous Substances list, 42 USC 9604, 40 CFR 302.

SAFE DRINKING WATER ACT: **MOUNTAIN FIBER LOOSEFILL™** is not regulated under the SDWA, 42 USC 300g-1, 40 CFR 141 et seq. Consult state and local regulations for possible water quality advisories regarding boron.
Clean Water Act (Federal Water Pollution Control Act): 33 USC 1251 et seq.

- a.) Cellulose Insulation is not itself a discharge covered by any water quality criteria of Section 304 of the CWA, 33 USC 1314
- b.) It is not on the Section 307 List of Priority Pollutants, 33 USC 1317, 40 CFR 129
- c.) It is not on the Section 311 List of Hazardous Substances, 33 USC 1321, 40 CFR 116.

OSHA/CAL OSHA: This SDS document meets the requirements of both OSHA (29 CFR 1910.1200) and Cal OSHA (Title 8 CCR 5194(g)) hazard communication standards. Refer to Exposure Control/Personal Protection for regulatory exposure limits.

IARC: The International Agency for Research on Cancer (of the World Health Organization) does not list or categorize **MOUNTAIN FIBER LOOSEFILL™** as a carcinogen.

CALIFORNIA PROPOSITION 65: **MOUNTAIN FIBER LOOSEFILL™** is not listed on any Proposition 65 lists of carcinogens or reproductive toxicants.

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: This SDS was finalized on June 1, 2015 and is compliant with OSHA HCS/HazCom 2012 Final Rule. This replaces the previous version dated August 1, 2013.

DISCLAIMER: The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose. Therefore, no warranty either express or implied of merchantability or fitness for particular purpose is made with respect to the product or the information contained herein.