



MATERIAL SAFETY DATA SHEET

THERMAFIBER® GRANULATED PRODUCTS

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SECTION I PRODUCT IDENTIFICATION

PRODUCT(S): THERMAFIBER® Granulated Products

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SYNONYM: Insulation

CHEMICAL FAMILY: Slag wool fiber.

SECTION II INGREDIENTS

| MATERIAL | WT% | ACGIH TLV (mg/m ³) | OSHA PEL (mg/m ³) | CAS NUMBER |
|------------------------------|-----|--------------------------------------|-------------------------------------|------------|
| Slag wool fiber ¹ | >95 | 10(T)/3(R) | 15(T)/5(R) | 65997-17-3 |
| Mineral Oil | <5 | 5 ^{mist} | 5 ^{mist} | 64742-65-0 |

(T) - Total (R) - Respirable (NE) - Not Established

¹OSHA and ACGIH recommended exposure level is 1 fiber/cc and NIOSH recommended exposure level is 3 fibers/cc. This material is slag wool. Other generic terms that are used or have been used to classify this material include mineral wool, stone wool, man-made mineral fiber (MMMF), and man-made vitreous fiber (MMVF). A more recent generic term that has appeared in the literature to describe these glass-like materials is synthetic vitreous fiber (SVF).

SECTION III HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

ACUTE: The primary component of this product is mineral wool fiber. During application or when dusty conditions exist, mineral wool dust may cause transitory mechanical irritation to skin, eyes or respiratory tract.

EYES: Direct contact with eye can cause mechanical irritation.

SKIN: This material (in wet state or as dust) is not chemically harmful if it gets on the skin and is not immediately washed off. However direct contact of dust and mineral wool fibers with skin can cause skin irritation (mechanical) and itchiness.

INHALATION: Inhalation of dust can cause nose, throat, lungs and upper respiratory tract irritation. Persons exposed to dust may be forced to leave area because of nuisance conditions such as coughing, sneezing and nasal irritation.

INGESTION: No known effects.

CHRONIC: Persons with chronic or systemic skin or eye disease should use precautions and wear all personal protective equipment when working with this product.

SECTION IV FIRST AID MEASURES

EYES: In case of contact, immediately flush thoroughly with copious amounts of water occasionally lifting the lower and upper lids (to remove particulates). Get medical attention immediately. Contact lenses should not be worn when working with this product.

SKIN: Skin contact is not a chemical hazard. Mechanical action of fibers on skin can cause itchiness. Irritation of skin may occur with prolonged and repeated contact. Rinse with cool water, followed by washing with soap and warm water. A commercially available skin cream or lotion may be helpful to treat dry skin areas. Wash hands before eating or using restroom.

INHALATION: If exposed to excessive levels of dust, leave area of dust exposure and remain away until coughing and other symptoms subside. Other measures are usually not necessary, however if conditions warrant, get medical attention.

INGESTION: No harmful or chronic effects expected. No specific recommendation. If gastric disturbance occurs, call physician.

TARGET ORGANS: Eyes, skin, lungs and respiratory system.
MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED: Pre-existing upper respiratory and lung disease such as, but not limited to, bronchitis, emphysema and asthma.

PRIMARY ROUTES OF ENTRY: Inhalation, eyes and skin contact.
Note to physician: This product is a mechanical irritant, and is not expected to produce any chronic health effects from acute exposures. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

SECTION V FIRE FIGHTING MEASURES

The products are non-combustible and do not pose a fire hazard. However, packaging material may burn.

Extinguishing Media: Carbon dioxide (CO₂), water, water fog, foam, dry chemical

Special Fire Fighting Procedures: No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

Unusual Fire and Explosion Hazards: None.

Special Fire Fighting Protective Equipment: Observe normal fire fighting procedures.

Flash Point (Method Used): Not applicable.

Upper and lower flammable limits in air: Not applicable.

Autoignition temperature: Not applicable.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide and trace gases.

SECTION VI ACCIDENTAL RELEASE MEASURES

CONTAINMENT: Not necessary. Treat as inert material.

CLEAN UP: Pick up large pieces. Use gloves to avoid skin irritation. Vacuum dust, preferably with an industrial vacuum cleaner with high efficiency air filter. If sweeping is necessary, use dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean up. These procedures will help minimize potential exposures.

DISPOSAL: Dispose in sanitary landfill in accordance with local, state and federal requirements.

SECTION VII HANDLING AND STORAGE

HANDLING: Use protective equipment to avoid irritation as described in Section 8.

STORAGE: Warehouse storage should be in accordance with package directions. Material should be kept dry and protected from the elements.

SECTION VIII EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation and local exhaust ventilation to meet TLV requirements of individual ingredients (see Section 2) and to control dusting conditions.

If cutting or trimming with power equipment, dust collectors and local ventilation should be used.

Avoid unnecessary exposure to dust and handle with care. Keep work area clean of dust and fibers by using an industrial vacuum cleaner with high efficiency filter or wetting down area with water. Never use compressed air and avoid dry sweeping.

EYE PROTECTION: Wear safety glasses with sideshields or goggles to avoid eye irritation.

RESPIRATORY PROTECTION: Wear a NIOSH/MSHA-approved dust respirator in poorly ventilated areas, where local exhaust is not feasible, if TLV is exceeded, and/or when dusty conditions exist. Avoid prolonged and repeated breathing of dust.

OTHER CLOTHING: Wear tight fitting goggles and gloves when dusty conditions exist. Wear long-sleeved, loose fitting clothing at the neck and wrists and minimize skin contact. Wash work clothing separately from other clothing. Rinse washer thoroughly after use.

**SECTION IX
PHYSICAL AND CHEMICAL PROPERTIES**

- **Appearance and Odor:** White to off white in color with low odor
- **Physical State:** Solid
- **Boiling Point:** Not applicable
- **Freezing Point:** Not applicable
- **Melting Point:** 2100° F (1150° C)
- **Specific Gravity (H₂O=1):** Not applicable
- **Solubility in Water:** Insoluble
- **pH Range:** Not applicable
- **Vapor Pressure:** Not applicable
- **Evaporation Rate (in-Butyl Acetate=1):** Not applicable
- **Percent Volatile:** Not applicable
- **Volatile Organic Compounds:** Not applicable

**SECTION X
CHEMICAL STABILITY**

STABILITY: Stable
REACTIVITY: Not reactive
INCOMPATIBILITY: Acids (gives off H₂S under certain acidic conditions)
HAZARDOUS POLYMERIZATION: Will not occur
HAZARDOUS DECOMPOSITION: Oxides of carbon and smoke would be produced at high temperatures with thermal decomposition.

**SECTION XI
TOXICOLOGICAL INFORMATION**

ACUTE DATA:
SLAG WOOL FIBER (65997-17-3)
Oral LD₅₀RAT: Not determined
Dermal LD₅₀RAT: Not determined
Skin Irritation: Mechanical Irritant
Eye Irritation: Mechanical Irritant
Contact with mineral wool fibers may cause temporary eye and skin irritation (mechanical). When products are handled continually, the skin irritation generally diminishes.
Chronic Data: Inhalation: In October 2001, the International Agency for Research on Cancer (IARC) classified mineral wool fibers (rock or slag) as Group 3 (not classifiable as to carcinogenicity to humans).

**SECTION XII
ECOLOGICAL INFORMATION**

This product is not expected to have an adverse effect on the ecology.

**SECTION XIII
DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD: Dispose of material in accordance with federal, state, and local regulations. Wastes are not hazardous as defined by the Resource Conservation and Recovery Act (RCRA; 40 CFR 261).
WASTE NUMBERS: No EPA Waste Numbers are applicable for this product's components.

**SECTION XIV
TRANSPORT INFORMATION**

U.S. DOT INFORMATION: Not a hazardous material per DOT shipping requirements. Not classified or regulated.

**SECTION XV
REGULATORY INFORMATION**

CANADIAN REGULATIONS:

WHMIS: D2B
All components of this product are included in the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

USA REGULATIONS:

All ingredients of this product are included in the U.S. Environmental

Protection Agency's Toxic Substances Control Act Chemical Substance Inventory.

CARCINOGENICITY CLASSIFICATION OF INGREDIENTS:

| Material | IARC | NTP |
|-------------------------|---------|------|
| Man Made Vitreous Fiber | Group 3 | None |

In October 2001, the International Agency for Research on Cancer (IARC) classified mineral wool fibers (rock or slag) as **Group 3 (not classifiable as to carcinogenicity to humans)**. IARC noted specifically: "no evidence of increased risks of lung cancer or mesothelioma (cancer of the lining of the body cavities) from occupational exposures during manufacture of these materials, and inadequate evidence overall of any cancer risk." This was a reversal of the IARC finding in 1987 of a Group 2B designation (possibly carcinogenic to humans) based on earlier studies in which animals were injected with large quantities of slag wool fibers.

**SECTION XVI
OTHER INFORMATION**

INFORMATION FOR HANDLING AND IDENTIFICATION OF CHEMICAL HAZARDS

NFPA Ratings: Health: 0 Fire: 0 Reactivity: 0 Other: N/A
HMIS Ratings: Health: 0 Fire: 0 Reactivity: 0
Personal Protection: Use eye and skin protection. Use NIOSH/MSHA - approved respiratory protection when necessary.
0 = Minimal Hazard 1 = Slight Hazard 2 = Moderate Hazard
3 = Serious Hazard 4 = Severe Hazard

Δ CAUTION:

Dust exposure can cause temporary eye, skin and respiratory tract irritation. Avoid creating dust and install in well ventilated area. Cut and trim with razor knife or hand saw to minimize dust levels. Using power tools for cutting will generate high dust levels. Power tools should be equipped with dust collection system. Use NIOSH/MSHA-approved dust respirator. Avoid dust contact with eyes and skin. Wear eye protection and long-sleeve, loose fitting clothing closed at the neck and wrists. Wash work clothing separately from other clothing. Rinse washer thoroughly.

**KEEP OUT OF REACH OF CHILDREN
THIS PRODUCT CONTAINS NO ASBESTOS**

FIRST AID: For skin irritation, rinse skin with cool water, followed by washing with soap and warm water. For eye irritation, flush eyes thoroughly with water for 15 minutes. If irritation continues, or product is swallowed, consult a physician. Additional product safety information is available on the Thermafiber web site, www.thermafiber.com or by calling (260) 563-2111.

Key/Legend

| | |
|-------|---|
| ACGIH | American Conference of Government Industrial Hygienists |
| CAS | Chemical Abstracts Service (Registry Number) |
| DOT | United States Department of Transportation |
| EPA | United States Environmental Protection Agency |
| HMIS | Hazardous Materials Identification System |
| IARC | International Agency for Research on Cancer |
| MSDS | Material Safety Data Sheet |
| MSHA | Mine Safety and Health Administration |
| NFPA | National Fire Protection Association |
| NIOSH | National Institute for Occupational Safety & Health |
| NTP | National Toxicology Program |
| OSHA | Occupational Health and Safety Administration |
| PEL | Permissible Exposure Limit |
| TLV | Threshold Limit Value |
