SAFETY DATA SHEET

GHS Compliant | OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Name **Vermiculite — All Grades** Masonry Insulation; Attic Insulation; Concrete Grade; Pool Base; D3, D4, A1, A2, A3, A4	**Manufacturer** **Whittemore Company, Inc.** 30 Glenn Street, Lawrence, MA 01843 Emergency: 978-681-8833 | Fax: 978-682-3413 www.whittemoreco.com
Product Class Hydrated Laminar Magnesium Aluminum Iron Silicate CAS# 1318-00-9	**Product Use** Insulation, Construction, Industrial, and Horticultural Applications SDS Date: June 16, 2025, | Revision: 2025-A

SECTION 2 — HAZARDS IDENTIFICATION

2.1 GHS Classification

- Skin Corrosion/Irritation: Category 3 (Mild Irritant)
- Serious Eye Damage/Eye Irritation: Category 2B (Eye Irritant)
- Specific Target Organ Toxicity – Single Exposure (Inhalation): Respiratory Irritant

2.2 Signal Word

⚠ WARNING

2.3 GHS Hazard Pictograms

The following GHS pictogram applies to this product:

GHS07
Exclamation Mark

2.4 Hazard Statements

- H316 – May cause mild skin irritation.
- H320 – Causes eye irritation.
- H335 – May cause respiratory irritation.

2.5 Precautionary Statements

Prevention:

- Avoid creating unnecessary dust during handling, transfer, or application.
- Use adequate ventilation. NIOSH-approved respirator or dust mask recommended.
- Eye protection is recommended when dust generation is likely.

Response:

- SKIN: Wash it off with soap and water. Seek medical attention if irritation persists.
- EYES: Flush with generous amounts of clean water for at least 15 minutes. Seek medical attention if irritation persists.

- INHALATION: Remove person to fresh air. Seek medical attention if victim is not breathing or symptoms persist.
- INGESTION: Do not induce vomiting. Seek medical attention or contact a Poison Control Center (1-800-222-1222).

Emergency Overview: Fine-particle vermiculite products present inhalation hazards that are readily controlled with appropriate dust protection equipment. Avoid processes that generate unnecessary airborne dust.

SECTION 3 — COMPOSITION / INFORMATION ON INGREDIENTS

Product Components: Exfoliated vermiculite powder or granules, CAS# 1318-00-9 (Hydrated Laminar Magnesium Aluminum Iron Silicate). Contains less than 0.1% crystalline silica (quartz).

Ingredient	CAS #	% (wt)	ACGIH TLV (mg/m^3)	NIOSH REL (mg/m^3)	OSHA PEL (mg/m^3)
Exfoliated Vermiculite	1318-00-9	>99.9	10 (Total) / 3 (Resp)	10 (Total) / 3 (Resp)	15 (Total) / 5 (Resp)
Quartz (Crystalline Silica) [1]	14808-60-7	<0.1	0.025 (Resp)	0.05 (Resp)	0.1 (Resp)

[1] Crystalline silica (quartz) content is less than 0.1%. This low concentration presents very low risk under normal handling conditions. LD50: Not available. LC50: Not available.

LD50: Not established for exfoliated vermiculite (presumed >2,000 mg/kg) | LC50: Not available

SECTION 4 — FIRST AID MEASURES

Eyes: Flush eyes with generous amounts of clean water for at least 15 minutes. Seek medical attention if irritation or discomfort persists.

Skin: Wash it off with soap and water. Seek medical attention if irritation persists.

Inhalation: Remove person to fresh air immediately. Seek medical attention if the victim is not breathing or if symptoms such as coughing or discomfort continue.

Ingestion: Do not induce vomiting. Seek medical attention or contact a Poison Control Center immediately (1-800-222-1222).

SECTION 5 — FIRE FIGHTING MEASURES

Flammable: No.

Extinguishing Media: Use media appropriate for surrounding materials.

Special Hazards: High airborne dust concentrations may be susceptible to explosion. Avoid generating dust clouds near ignition sources.

Hazardous Combustion Products: None.

Rating System	Health	Flammability	Reactivity
NFPA	* (Refer to SDS)	0	0
HMIS	* (See SDS)	0	0

HMIS Personal Protection: E

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain the spill using normal clean-up procedures. Take care to prevent dust from becoming airborne. Vacuum cleaning systems are strongly recommended. Wetting spilled material with water may help control dust and facilitate clean-up. Do not flush to sewer or surface waterways. Dispose of collected material in accordance with all applicable local, state, and federal regulations.

SECTION 7 — HANDLING AND STORAGE

Handling

- Avoid creating unnecessary dust during transfer, mixing, or application.
- Use engineering controls and appropriate PPE where dust generation is unavoidable.
- Wash hands and exposed skin thoroughly after handling.

Storage

- Store in a cool, dry, well-ventilated area.
- Store with other dusty materials, away from products that could be adversely affected by dust contamination.
- Keep away from hydrofluoric acid (HF) — contact produces toxic silicon tetrafluoride gas.

SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Component	OSHA PEL	ACGIH TLV
Exfoliated Vermiculite (General Dust)	15 mg/m³ (Total) / 5 mg/m³ (Resp)	10 mg/m³ (Total) / 3 mg/m³ (Resp)
Crystalline Silica (Quartz)	0.1 mg/m³ (Resp)	0.025 mg/m³ (Resp)

Engineering Controls

- Maintain good housekeeping practices in all work areas.
- Provide local exhaust ventilation at workstations where this product is handled.
- Use enclosed or semi-enclosed equipment where feasible to minimize dust generation.

Required Personal Protective Equipment (PPE)

- Respiratory Protection: NIOSH/OSHA-approved dust respirator adequate for contaminant concentrations encountered (minimum N95 for routine use).
- Eye Protection: Safety glasses or goggles recommended. Do not wear contact lenses when handling this material.
- Skin Protection: Chemical-resistant (plastic or rubber) gloves if skin irritation occurs. Coveralls recommended for frequent handling.
- Foot Protection: Disposable or chemical-resistant footwear recommended for frequent or prolonged handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid — powder or granules
Appearance & Odor	Tan powder or granules; no odor
pH (10% slurry)	6.5–7.5 (near neutral)
Specific Gravity	2.5–2.7
Solubility in Water	Negligible
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Boiling Point	Not applicable
Flash Point	Not applicable — non-flammable
Autoignition Temperature	Not applicable
Flammability Limits	Not applicable
Evaporation Rate	Not applicable
Odor Threshold	Not applicable

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability: Chemically stable under normal handling and storage conditions.
Conditions to Avoid: Contact with hydrofluoric acid (HF).
Incompatible Materials: Hydrofluoric acid (HF) — reaction produces toxic silicon tetrafluoride gas.
Hazardous Decomposition Products: Silicon tetrafluoride gas upon contact with HF only. No hazardous decomposition products under normal use conditions.
Hazardous Polymerization: Will not occur.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute Health Effects

- SKIN: Slightly hazardous — repeated or prolonged contact may cause irritation due to the drying effect of vermiculite.
- EYES: Mechanical irritation or injury may occur. Fine particles can cause eye irritation.
- INHALATION: Upper respiratory irritant. May aggravate pre-existing respiratory conditions.
- INGESTION: LD50 not established; presumed >2,000 mg/kg. Do not induce vomiting.

Chronic Health Effects

- Respiratory: Long-term inhalation of respirable crystalline silica can cause disabling lung disease (silicosis). This product contains less than 0.1% crystalline silica, presenting very low risk under normal handling conditions.
- Carcinogenicity: Contains <0.1% crystalline silica with few particles of respirable size. IARC: Not reviewed. ACGIH: PNOS (Particulates Not Otherwise Specified) — not classified as carcinogenic.
- Skin Sensitization: Potential irritant with repeated exposure. Non-sensitizing in standard testing.
- Mutagenicity: Ame's test (Salmonella typhimurium, with/without metabolic activation): Negative results reported.
- Reproductive/Developmental Toxicity: Not established.

SECTION 12 — ECOLOGICAL INFORMATION

Aquatic Toxicity: Low hazard for usual industrial or commercial handling. Vermiculite is approved for use in soils and horticultural applications. The mineral is inert and does not bioaccumulate.

Persistence / Degradability: Exfoliated vermiculite is an inert mineral and does not biodegrade. It is not expected to persist as a hazardous substance in the environment.

Mobility: Prevent spills from entering drains, storm sewers, or surface waterways. Dry material should be collected and contained before disposal.

SECTION 13 — DISPOSAL CONSIDERATIONS

Dispose of this product and contaminated materials in full compliance with all applicable local, state, and federal regulations. Exfoliated vermiculite is generally classified as non-hazardous solid waste. Contact your local waste management authority for guidance on large-quantity disposal.

SECTION 14 — TRANSPORT INFORMATION

DOT (US Road/Rail): Not regulated — no special requirements.

IMO (Maritime): Non-hazardous.

ICAO/IATA (Air): Non-hazardous.

SECTION 15 — REGULATORY INFORMATION

United States

- OSHA Hazard Communication Standard: This product meets the definition of a hazardous chemical under 29 CFR 1910.1200 and must be included in the employer's Hazard Communication Program.
- TSCA: Exfoliated vermiculite is included as a naturally occurring material on the TSCA Chemical Substance Inventory.

Canada

- WHMIS Classification: D2B (Toxic — other toxic effects). Subject to WHMIS labeling and SDS requirements.

Long-Term Potential Health Effects (Regulatory)

- Skin irritation from repeated or prolonged contact.
- Eye irritation from mechanical particle contact.
- Respiratory irritation; individuals with pre-existing lung conditions should avoid exposure.
- Long-term inhalation of crystalline silica in respirable quantities may cause silicosis — risk is low given the <0.1% crystalline silica content of this product.

Note: This SDS has been prepared in accordance with GHS hazard criteria, OSHA 29 CFR 1910.1200, and Canadian Controlled Products Regulations (CPR).

SECTION 16 — OTHER INFORMATION

SDS Preparation Date: June 16, 2025

Revision: 2025-A (Updated from October 17, 2011, MSDS — converted to GHS/SDS format, formatting updated, regulatory language revised)

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