SAFETY DATA SHEET — 16 Sections

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Vermiculite			[WHMIS Classification] Not Applicable
Product Use Insulating aggregate, Soil conditioner, Low density filler, Absorbent			
Manufacturer's Name Therm-O-Rock East, Inc.		Supplier's Name	
Street Address 1 Pine Street		Street Address	
City New Eagle	Province PA	City	Province
Postal Code 15067	Emergency Telephone 724-258-3670	Postal Code	Emergency Telephone
Date MSDS Prepared 4-30-2015	MSDS Prepared By Stanley R. Slawek	Phone Number (724) 258-3670	

SECTION 2 — HAZARDS IDENTIFICATION

GHS Classification	Eye Irritant, Category 2
Signal Word	Warning
Hazard Statement	Causes eye irritation
GHS Symbol	
Precautionary Statements	Wear eye protection. 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: Get medical attention.
Other Hazards	Avoid breathing dust. Exposure to vermiculite causes no identified short- or long-term health effects, but nuisance dust may cause minor respiratory irritation.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients *(specific)*	%	CAS Number	LD_{50} of Ingredient *(specify species and route)*	LC_{50} of Ingredient *(specify species)*	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)
Vermiculite (Magnesium, Aluminum Iron Silicate)	>98	1318-00-9	Not Available	Not Available	10	1
Silica	≈1	14808-60-7	Not Available	Not Available	Not Available	.05

SECTION 4 — FIRST AID MEASURES

Skin Contact
Wash thoroughly with mild soap and water. Seek medical attention if irritation develops. Remove any contaminated clothing and launder thoroughly before reuse.
Eye Contact
Flush with tepid water for at least 20 minutes holding the eyelids wide open. Seek medical attention if irritation develops.
Inhalation
Remove exposed person to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, artificial respiration should be started immediately. Seek medical attention.
Ingestion
Not expected to be an important route of entry into the body. If large amounts of the product are ingested, seek medical attention.

SECTION 5 — FIRE FIGHTING MEASURES

Flammable	If yes, under which conditions?	
☐ Yes ☒ No		
Means of Extinction		
Use extinguishing media appropriate for surrounding material.		
Flashpoint (° C) and Method	Upper Flammable Limit (% by volume)	Lower Flammable Limit (% by volume)
Not Available	Not Available	Not Available
Auto ignition Temperature (°C)	Explosion Data — Sensitivity to Impact	Explosion Data — Sensitivity to Static Discharge
Not Available	Not Available	Not Available
Hazardous Combustion Products		
Not Available		
NFPA		
Health: 1, Flammability: 0, Reactivity: 0, Other: None		

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Pick up released product with appropriate implements and return to original container if reusable. If not reusable, place in appropriate containers for disposal. Appropriate personal protective equipment cited in Section 8 should be worn during all clean up operations. Although the product itself is non-hazardous, material collected during clean up operations may be contaminated and should be treated as hazardous unless specific testing, including TCLP, shows the collected material to be non hazardous

SECTION 7 — HANDLING AND STORAGE

Handling Procedures and Equipment

Appropriate personal protective equipment cited in Section 8 should be worn during handling. Wet mopping or vacuuming with a unit that contains a HEPA filter is recommended to clean up any dusts that may be generated during handling and processing. See also section 6. Wash hands and face thoroughly before eating, drinking or smoking.

Storage Requirements

Do not store with or near incompatible materials cited in Section 10. Store in tightly closed containers out of contact with the elements. Good housekeeping and engineering practices should be employed to prevent the generation and accumulation of dusts.

SECTION 8 — EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits ☒ ACGIH TLV ☒ OSHA PEL ☐ Other *(specify)*

Specific Engineering Controls *(such as ventilation, enclosed process)*

Local exhaust ventilation should be provided to maintain exposures below the limits recommended for nuisance particulates of 10 mg/M^3 for total particulates and 3 mg/M^3 for respirable particulates. Design details for local exhaust ventilation systems may be found in the latest edition of “Industrial Ventilation: A manual of Recommended Practices” published by the ACGIH Committee on Industrial Ventilation, P.O. Box 16153 Lansing, MI 48910. The need for local exhaust ventilation should be evaluated by a professional industrial hygienist. Local exhaust ventilation systems should be designed by a professional engineer.

Personal Protective Equipment ☒ Gloves ☒ Respirator ☒ Eye ☐ Footwear ☒ Clothing ☐ Other

If checked, please specify type

Gloves: Polymeric gloves are recommended to prevent possible irritation. PVC or similar construction materials are recommended.

Respirator: If dusts or particulates are generated during handling or processing and exposures may exceed the limits cited above, use, as a minimum, a NIOSH approved1/2 face piece respirator with cartridges approved for particulate matter with an exposure limit of not less than 0.05 mg/M^3. If exposures may exceed 10 times the limit cited in Section 2, consult your respiratory protective equipment supplier or a professional industrial hygienist for selection of the proper equipment. The evaluation of the need for respiratory protection should be made by a professional industrial hygienist.

Eye: Chemical protective goggles are recommended where there is the possibility of eye contact with the product. Safety glasses with side shields are recommended for all other operations.

Clothing: A polymeric coated apron or other body covering is recommended where there is a possibility if regular work clothing becoming contaminated with the product. All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned and reuse.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Odor and Appearance	Odor Threshold (ppm)
Solid	Tan Flakes, Granules, or Powder.	None
Specific Gravity	**Vapor Density (air = 1)**	**Vapor Pressure (mmHg)**
(Bulk) 0.66-0.96 g/cc	N/A	N/A
Evaporation Rate	**Boiling Point (° C)**	**Freezing Point (° C)**
N/A	Not Determined	N/A
pH	**Coefficient of Water/Oil Distribution**	**[Solubility in Water]**
N/A	N/A	<1 %

SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability	If no, under which conditions?
☒ Yes ☐ No	
Incompatibility with Other Substances	**If yes, which ones?**
☒ Yes ☐ No	Do not store with strong acids, or reducing agents.

Reactivity and under what conditions?

Product will undergo an exfoliation reaction with a resultant large increase in volume at approximately 300°.

Hazardous Decomposition Products

None that are known. Product is stable to at least 2400° F.

SECTION 11 — TOXICOLOGICAL INFORMATION

Effects of Acute Exposure

Eye contact may cause mechanical irritations if exposed to excessive amount of vermiculite. Skin contact may aggravate existing dermatitis. Inhalation from prolonged and continuous exposure may aggravate existing asthmatic or respiratory conditions.

Effects of chronic exposure

Prolonged inhalation of excessive levels vermiculite dust may cause a simple pneumoconiotic condition, not normally associated with a decrement in lung function. In cases of long-term exposure to extremely high levels of dust, complicated pneumoconiosis with lung function may occur.

Irritancy of Product

N/A

Skin sensitization	Respiratory sensitization
N/A	N/A
Carcinogenicity-IARC	**Carcinogenicity - ACGIH**
N/A	N/A
Reproductive toxicity	**Teratogenicity**
N/A	N/A
Embrotoxicity	**Mutagenicity**
N/A	N/A

Name of synergistic products/effects

N/A

SECTION 12 — ECOLOGICAL INFORMATION

Aquatic Toxicity

In vitro ecotoxicity studies conducted on aqueous extracts of the product under the auspices of the South African Department of Water Affairs and Forestry in 1998 indicated that the product most probably is not toxic to the environment. In each of the ecotoxicity tests cited below, 50 grams of the product were extracted with a liter of distilled water. The resulting solution was used to derive the toxicity parameters. The 48 hour EC_0 and EC_{50} (Daphnia pulex lethality) were determined to be >50 milligrams of extract per liter (mg/l). The 72 hour EC_0 and EC_{50} (algal, Selenastrum capricornutum, growth inhibition) were determined to be >50 mg/l. The 72 hour EC_0 and EC_{50} (bacterial, Pseudomonas putida, growth inhibition) were determined to be >50 mg/l. The 48 hour EC_0 and EC_{50} (frog, Xenopus laevis, embryo lethality) were determined to be >50 mg/l.

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste Disposal

As prepared, product is considered non-hazardous. It should be disposed of in and EPA approved landfill in accordance with all local, state and federal regulations. If used or waste product is disposed of testing, including TCLP, should be conducted to determine hazard characteristics. Empty containers will contain product residues. Observe proper safety and handling precautions. Do not allow empty containers or packaging to be used for any purpose except to store and ship original product.

SECTION 14 — TRANSPORT INFORMATION

Special Shipping Information

Not currently regulated under Department of Transportation regulations.

TDG	DOT	PIN
N/A	N/A	N/A
IMO	ICAO	
N/A	N/A	

SECTION 15 — REGULATORY INFORMATION

WHMIS Classification	OSHA
Not Controlled	Irritant, Lung Hazard, Skin Hazard, Eye Hazard.
SERA	TSC
Acute Hazard.	Not Listed

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16 — OTHER INFORMATION

Notice: This information relates only to the material designated and may not be valid for such material used in combination with any other materials or in any process. All statements, information and data provided are believed to be accurate and reliable, but are presented without any guarantee, representation, warranty or responsibility of any kind, expressed or implied. Any and all representations and/or warranties of merchantability of fitness for a particular purpose are specifically disclaimed. Users should make their own investigations as to the suitability of the information or product for their particular purpose. Nothing in this document is intended as permission, inducement or recommendation to violate any laws or practice any invention covered by existing patents, copyrights or inventions. Therm-O-Rock East, Inc. does not accept liability for any loss or damage that may occur from the use of this information.