Safety Data Sheet – Vermiculite

_____I. PRODUCT IDENTIFICATION_____

Trade Name (as labeled): Therm-O-Rock Vermiculite
Manufacturers Name: Therm-O-Rock West, Inc.
Website & Email: www.thermorock.com / general@thermorock.com
Address: 6732 W Willis Road #5014
Chandler, AZ 85226
Phone: (520) 796-1000
Product Use: Insulating aggregate, Soil conditioner, Low density filler, Absorbent

_____II. HAZARD INDENTIFICATION_____

SYMPTONS OF EXPOSURE for each potential route of exposure:
Routes of Entry: Inhalation, open wounds and eyes.
Health Hazards: Nuisance dust – avoid breathing dust.
Carcinogenity: N/A
HEALTH EFFECTS OR RISKS FROM EXPOSURE:
Acute: None
Chronic: Excessive inhalation over long period may cause harmful irritation; use mask suitable for nuisance dust.
Target Organ: None
FIRST AID EMERGENCY PROCEDURES:
Inhaled: Remove affected individual from dusty area to area with clean air.
Eyes: Flush with water

_____III. COMPOSITION/INFORMATION ON INGREDIENTS_____

Ingredient Name	CAS Number	%	PEL (total)	TLV (total)
Vermiculite	1318-00-9	100	15 mg/M3	10mg/M3
Quartz	14808-60-7	<0.1%	0.1 mg/M3	0.05 mg/M3

Vermiculite is hydrated magnesium-aluminum-iron silicate mineral.
Comments: Vermiculite is not specifically listed in the OSHA List of *Hazardous and Toxic Substances* (Hazard Communication Standard 29 CFR 1910.1200) but would be regulated under the heading ”Particles Not Otherwise Regulated (PNOR). The product is classified by ACGIH as a “Nuisance Dust” or “Particulates Not Otherwise Classified” (PNOC).

_____IV. FIRST-AID MEASURES_____

Eye Contact: Flush eye with clear water or eye rinse solution. Consult physician if irritation persists.
Skin Contact: Apply moisture renewing lotions if dryness occurs
Inhaled: Remove affected individual from dusty area to area with clean air.
Swallowed: Drink generous amounts of water to reduce bulk and drying effects.

_____V. FIRE-FIGHTING MEASURES_____

Flammable: No
Means of Extinction: Use extinguishing media appropriate for surrounding material.
Flashpoint and Method, Upper Flammable Limit, Lower Flammable Limit, Auto Ignition, Explosion Data -Sensitivity to Impact, Explosion Data – Sensitivity to Static Discharge, Hazardous Combustion Products – NOT AVAILABLE
NFPA – Health: 1, Flammability: 0, Reactivity: 0, Other: None

_____VI. 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.

_____VII. 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. S tore 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.

_____VIII. EXPOSURE CONTROL / PERSONAL PROTECTION_____

Exposure Limits: **X** ACGIH TLV **X** OSHA Pel

Specific Engineering Controls: Local exhaust ventilation should be provided to maintain exposures below the limits recommended for nuisance particulates of 10mg/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: Suggested: Gloves, Respirator, Eye, Clothing

Not Required: Footwear, Other

Gloves: Polymeric gloves are recommended to prevent possible irritation. PVS 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 approved ½ 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 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.

_____VIIII. PHYSICAL AND CHEMICAL PROPERTIES_____

Physical State: Solid

Odor and Appearance: Tan Flakes, Granules, or powder.

Specific Gravity: 0.66-0.96 g/cc **Vapor Density/Vapor Pressure/Evaporate Rate:** N/A

Boiling Point: Not Determined **Freezing Point:** N/A

PH: N/A **Coefficient of Water/Oil Distribution:** N/A **Solubility in Water:** <1%

_____X. STABILITY AND REACTIVITY _____

Stability: **__X__Stable** _____Unstable

Incompatibility with other substances: Do not store with strong acids, or reducing agents.

Reactivity and under what conditions: Product will undergo an exfoliation reaction with a result large increase in volume at approximately 300*.

Hazardous Decomposition Products: None that are known. Product is stable to at least 2400*F.

_____XI. 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 pueumoconiotic 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:** N/A

Respiratory sensitization: N/A **Carcinogenicity-IARC/ACGIH:** N/A

Reproductive toxicity/Teratogenicity: N/A **Embrotoxicity/Mutagenicity:** N/A

Name of synergistic products/effect: N/A

_____XII. ECOLOGICAL INFORMATION_____

Aquatic Toxicity: In vitro ecotoxicity studies conducted on aqueous 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 Daphnia pulex lethality were determined to be >50 milligrams of extract per liter (mg/l). The 72 hour algal, Selenastrum capricornutum, growth inhibition were deterred to be >50 mg/l. The 72 hour bacterial, Pseudomonas putida, growth inhibition were determined to be >50 mg/l. The 48 hour frog, xenopus laevis, embryo lethality were determined to be >50 mg/l.

_____XIII. 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.

_____XIII. TRANSPORATION INFORMATION_____

Special Shipping Information: Not currently regulated under Department of Transportation regulations.

_____XIII. REGULATORY INFORMATION_____

WHMIS Classification: Not controlled. **OSHA:** Irritant, Lung Hazard, Skin Hazard, Eye Hazard.

SERA: Acute Hazard. **TCS:** 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.

_____XIIII. Other Information_____

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Date Prepared or Revised: February 3, 2015

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