



# SAFETY DATA SHEET - 16 Sections

The Schundler Company Sid Harvey item # 649

SDS # Z0308

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier <b>Expanded Vermiculite (All Grades)</b>		WHMIS CLASSIFICATION: Not Applicable	
Product Use <b>Light weight aggregate, Horticultural aggregate, Insulation, Packing Material, Absorbent</b>			
Manufacturer's Name <b>The Schundler Company</b>		Supplier's Name	
Street Address <b>150 Whitman Avenue</b>		Street Address	
City, State <b>Edison, NJ</b>		City Province	
Postal Code <b>08817</b>	Emergency Telephone <b>732-287-2244</b>	Postal Code	Emergency Telephone
Date SDS Prepared <b>August 3, 2015</b>		SDS Prepared By <b>Schundler Consulting</b>	Phone Number <b>732-287-2244</b>

## SECTION 2 - HAZARDS IDENTIFICATION

<u>Route of Entry</u>	<input checked="" type="checkbox"/> Skin Contact	<input type="checkbox"/> Skin Absorption	<input checked="" type="checkbox"/> Eye Contact	<input checked="" type="checkbox"/> Inhalation	<input type="checkbox"/> Ingestion
<u>Emergency Overview</u> Product is tan flakes, granules or powder with no odor. Dusts may cause irritation of eyes, skin, mucous membranes and respiratory tract. Wear appropriate personal protective equipment. Keep individuals not involved in the cleanup out of the area. Pick up released product with appropriate implements and return to original container if reusable. If not reusable, place in appropriate containers for disposal. 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. Product is quite inert and is not expected to present an environmental hazard.					
<u>WHMIS Symbols</u> Not Regulated					
<u>Potential Health Effects</u>  <u>Skin:</u> Not absorbed by the skin. But may cause dryness if prolonged exposure. <u>Eye:</u> May cause irritation (tear formation and redness) if dust gets in eyes.  <u>Inhalation:</u> No specific long term health effects have been identified for asbestos-free and/or silica free-vermiculite. As is true of all nuisance or inert particulates, inhalation of high concentrations of vermiculite dusts and/or particulates over prolonged periods of time may cause a benign pneumoconiosis.  Prolonged exposure to respirable crystalline silica (quartz) may cause a progressive, disabling lung disorder (silicosis). Symptoms may include, cough, shortness of breath, wheezing, decrease in pulmonary function, and recurring non-specific pulmonary illness. The onset of symptoms, except in cases of massive exposures, is usually gradual over a period of several years and is accompanied by changes in the x-ray picture of lungs. Crystalline silica has been listed a potential human carcinogen (2A) by the International Agency for Research on Cancer (IARC) and as a substance that can be reasonably anticipated to cause cancer in humans by the National Toxicology program.  Pre-existing lung and skin conditions may possibly be aggravated by exposure to the components of this product.  <u>Ingestion:</u> Ingestion of small to moderate quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.					

## 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

<u>Skin Contact</u> Wash thoroughly with mild soap and water. Seek medical attention if irritation develops. Remove any contaminated clothing and launder thoroughly before reuse.
<u>Eye Contact</u> Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.
<u>Inhalation</u> Remove to fresh air. Blow nose to evacuate dust. . If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.
<u>Ingestion</u> Drink generous amounts of water to reduce bulk and drying effects.

## SECTION 5 - FIRE FIGHTING MEASURES

Flammable	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<u>Means of Extinction</u> N/A		
<u>Flashpoint (°C) and Method</u> None	<u>Upper Flammable Limit (% by volume)</u> None	<u>Lower Flammable Limit (% by volume)</u> None
<u>Auto Ignition Temperature (°C)</u> None	<u>Explosion Data—Sensitivity to Impact</u> None	<u>Explosion Data—Sensitivity to Static Discharge</u> N/A
<u>Hazardous Combustion Products</u> N/A		
<u>NFPA</u> Health: 1    Flammability: 0    Reactivity: 0    Other: None		

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

<u>Personal Precautions:</u> If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles.
<u>Containment and Cleanup:</u> Vacuum clean dust with equipment fitted with HEPA filter. Use dust suppressant such as water if sweeping is necessary. 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.
<u>Environment:</u> Not considered as hazardous waste by RCRA (40 CFR Part 261). Place waste and spillage in closed containers. Dispose of in approved landfill.

## SECTION 7 - HANDLING AND STORAGE

<u>Handling Procedures and Equipment</u> Minimize dust generation. Avoid contact with eyes. Avoid breathing dust. Repair or dispose of broken bags. 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.
<u>Hazardous Combustion Products</u> Store in a dry place to maintain packaging integrity and product quality. Observe all label precautions and warnings.

## SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

<u>Exposure Limits</u>	<input checked="" type="checkbox"/> ACGIH TLV	<input checked="" type="checkbox"/> OSHA PEL	<input type="checkbox"/> Other	
<u>Specific Engineering Controls (such as ventilation, enclosed process)</u>				
<p>Adequate ventilation and appropriate local exhaust where needed to keep dust level below PEL. Local exhaust ventilation should be provided to maintain exposures below the limits recommended for nuisance particulates of 10 mg/M<sup>3</sup> for total particulates and 3 mg/M<sup>3</sup> 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.</p>				
<u>Personal Protective Equipment</u>	<input checked="" type="checkbox"/> Gloves	<input checked="" type="checkbox"/> Respirator	<input checked="" type="checkbox"/> Eye	<input type="checkbox"/> Footwear
				<input checked="" type="checkbox"/> Clothing
				<input type="checkbox"/> Other
<u>If Checked, Please Specify Type:</u>				
<p><u>Skin:</u> No special equipment is required.</p> <p><u>Respiratory:</u> Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half mask respirator. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two-hundred (200) times the PEL use a power air-purify (positive pressure) respirator with replaceable N95 filter. If dust concentration is greater than two-hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet. Always 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. Always 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.</p> <p><u>Eye:</u> Goggles to protect from dust.</p> <p><u>Clothing:</u> All soiled or dirty clothing and personal protective equipment should be thoroughly cleaned and reuse.</p>				

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical State</u> Solid	<u>Odor and Appearance</u> Odorless Tan Flakes, Granules or Powder		<u>Odor Threshold (ppm)</u> N/A
<u>Specific Gravity</u> 2.3-2.6	<u>Vapor Density (air=1)</u> N/A		<u>Vapor Pressure (mmHg)</u> N/A
<u>Evaporation Rate</u> N/A	<u>Boiling Point (°C)</u> N/A	<u>Melting Point</u> 1260-1370 °C	<u>Freezing Point (°C)</u> N/A
<u>pH</u> 6-9	<u>Coefficient of Water/Oil Distribution</u> N/A		<u>Solubility in Water</u> Insoluble (<1%)

## SECTION 10 - STABILITY AND REACTIVITY

<u>Chemical Stability</u>	<u>If not, under what conditions</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<u>Incompatibility with other Substances</u>	<u>If yes, which ones?</u>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Do not store with strong acids or reducing agents.
<u>Reactivity and under what conditions?</u>	
No dangerous reactions known.	
<u>Hazardous Decomposition Products</u>	
None. Product is stable to at least 2400° F.	

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Effects of Acute Exposure

Potential irritant for skin contact, eye contact or inhalation. 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

Potential irritant for skin contact, eye contact or inhalation.

### Skin Sensitization

N/A

### Respiratory Sensitization

N/A

### Carcinogenicity—IARC

N/A

### Carcinogenicity—ACGIH

N/A

### Reproductive Toxicity

N/A

### Teratogenicity

N/A

### Embrototoxicity

N/A

### Mutagenicity

N/A

### Name of Synergistic Products/Effects

N/A

## SECTION 12 - ECOLOGICAL INFORMATION

### Aquatic Toxicity

Generally considered inert. 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<sub>0</sub> and EC<sub>50</sub> (Daphnia pulex lethality) were determined to be >50 milligrams of extract per liter (mg/l). The 72 hour EC<sub>0</sub> and EC<sub>50</sub> (algal, Selenastrum capricornutum, growth inhibition) were determined to be >50 mg/l. The 72 hour EC<sub>0</sub> and EC<sub>50</sub> (bacterial, Pseudomonas putida, growth inhibition) were determined to be >50 mg/l. The 48 hour EC<sub>0</sub> and EC<sub>50</sub> (frog, Xenopus laevis, embryo lethality) were determined to be >50 mg/l.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### Waste Disposal

Not considered hazardous waste by the RCRA (40 CFR Part 261). Place waste and spillage in closed containers. Dispose in accordance with Federal, State and Local regulations.

## SECTION 14 - TRANSPORT INFORMATION

### Special Shipping Information

No known shipping regulations.

### PIN

N/A

### IDG

N/A

### DOT

N/A

### IMO

N/A

### ICAO

N/A

## SECTION 15 - REGULATORY INFORMATION

<u>WHMIS Classification</u> Not Controlled	<u>OSHA</u> Irritant, Lung Hazard, Skin Hazard, Eye Hazard
<u>SERA</u> Acute Hazard for minute contamination with silica. Otherwise, <b>SARA Section 311/312 (40 CFR 370 Subparts B and C)</b> <b>Acute Health:</b> No <b>Chronic Health:</b> No <b>Fire:</b> No <b>Pressure:</b> No <b>Reactive:</b> No	<u>TSCA</u> Not listed
<i>This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS / SDS contains all of the information required by CPR.</i>	

## 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. The Schundler Company does not accept liability for any loss or damage that may occur from the use of this information.

# MATERIAL SAFETY DATA SHEET---

## VERMICULITE

### -----I. PRODUCT IDENTIFICATION-----

**TRADE NAME (as labeled)** Schundler Company Vermiculite (Expanded)  
**MANUFACTURERS NAME** THE SCHUNDLER COMPANY  
**www.schundler.com**  
**Address (complete mailing address):** 150 Whitman Avenue  
Edison, N.J. 08817  
**Phone number:** (732) 287-2244  
info@schundler.com  
**Date Prepared or Revised:** February 25, 2004

### -----II. HAZARDOUS INGREDIENTS-----

Chemical Names	CAS Numbers	Exposure Limits in Air		
		ACGIH TLV (total)	ACGIH TLV (respirable)	OTHER)
Vermiculite	1318-00-9	10 mg/M <sup>3</sup>	3 mg/M <sup>3</sup>	30 mppcf

Vermiculite is the mineralogical name given to hydrated laminar mangesium-aluminum-iron silicates which resemble mica in appearance. When subjected to heat, crude vermiculite has the unusual property of exfoliating or expanded into worm-like particles (the name vermiculite is derived from the Latin 'vermiculare', meaning to breed worms.)

Vermiculite is considered a nuisance dust (also called "Particulates Not Otherwise Classified (PNOC) by ACGIH).

Alpha-Cristobalite & Tridymite: Less than 0.1%  
Alpha Quartz: 0.01 to 0.05%

### -----III. PHYSICAL PROPERTIES-----

**Vapor Density (air = 1)** N/A **Melting point or range. C°** 1350+  
(Collapse and

coalescence  
of the  
individual  
flakes begin  
at this  
temperature.)

<b>Specific Gravity</b>	2.5	<b>Boiling point or range. F°</b>	N/A
<b>Solubility in Water</b>	<1%	<b>Evaporation rate (butyl acetate = 1)</b>	N/A
<b>Vapor Pressure, mmHg at 20°C</b>	N/A		
<b>Appearance and odor:</b>	tan/brown with no odor		

**HOW TO DETECT THIS SUBSTANCE** (warning properties of substance as a gas, vapor, dust or mist)

Visual only (dust), No gas, vapors, or mist emitted.

-----**IV. FIRE AND EXPLOSION**-----

<b>Flash Point, F° (give method)</b>	Vermiculite is a fully oxidized non-flammable mineral. It is noncombustible and non-flammable.			
<b>Auto ignition temperature, F°</b>	N/A			
<b>Flammable limits in air, Volume%:</b>	N/A	<b>lower(LEL)</b>	N/A	<b>upper(UEL)</b> N/A
<b>Fire extinguishing materials:</b>	N/A			
_____water spray	_____carbon dioxide	_____other:		
_____foam	_____dry chemical			
<b>Special fire fighting procedures:</b>	N/A			
<b>Unusual fire and explosion hazards:</b>	N/A			

-----**V. HEALTH HAZARD INFORMATION**-----  
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**SYMPTOMS OF OVEREXPOSURE** for each potential route of exposure

**Inhaled:** Coughing

**Contact with skin or eyes:** Possible eye irritation from dust particles; wear eye protection

**Absorbed through skin:** N/A

**Swallowed:** 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**

**Eye Contact:** Attempt to wash out with clear water; if unable have particle removed by doctor

**Skin Contact:** None

**Inhaled:** Remove affected individual from dusty area to area with clean air

**Swallowed:** None

#### **SUSPECTED CANCER AGENT?**

  X   **NO:** This product's ingredients are not found in the lists below.

**YES:** \_\_\_\_\_ **Federal OSHA**    \_\_\_\_\_ **NTP**    \_\_\_\_\_ **IARC**

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

Any Respiratory illnesses which a nuisance dust may aggravate

#### **-----VI. REACTIVITY DATA-----**

**Stability:** \_\_\_\_\_   X   **Stable**    \_\_\_\_\_ **Unstable**

**Incompatibility (Materials to avoid):** None

**Hazardous decomposition products (including combustion products):** None



**Hazardous Polymerization:** \_\_\_\_\_ **May Occur**      X   **Will not occur**

**Conditions to Avoid:**                      None

-----**VII. SPILL, LEAK, AND DISPOSAL PROCEDURES-**  
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**Spill response procedures (include employee protection measures):**

Vacuum clean or sweep material; Use respirators suitable for nuisance dust and eye protection.

**Preparing wastes for disposal (container types, neutralization, etc.):**

Dispose in bulk or containers according to local dump requirements. No special treatment required.

**Note: Dispose of all wastes in accordance with federal, state, and local regulations.**

-----**VIII. SPECIAL HANDLING INFORMATION**-----  
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**Ventilation and engineering controls:**

Maintain dust level below TLV.

**Respiratory protection (type)**

Masks suitable for nuisance dust.

**Eye Protection (type)**

Protective goggles.

**Gloves (specify material)**

Not required.

**Other Clothing and equipment**

Not required.

**Work practices, hygienic practices**

Use good housekeeping to avoid transient dust.

**Other handling and storage requirements**

Use good housekeeping to avoid transient dust.

**Protective measures during maintenance of contaminated equipment**

None special other than respirators and goggles.

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