

# Material Safety Data Sheet



Date Reviewed and Issued: March 24, 2005

MSDS# 4000

## Section 1. Identification: Vermiculite – Expanded/Exfoliated and Ore

### Product Names:

- Sunshine Strong-Lite Extra Fine Vermiculite
- Sunshine Strong-Lite Fine Vermiculite
- Sunshine Strong-Lite Medium Vermiculite
- Sunshine Strong-Lite Coarse Vermiculite
- Sunshine Strong-Lite Extra Coarse Vermiculite
- Sunshine Strong-Lite Cavity Fill
- Sunshine Strong-Lite Mica Flakes

### Manufacturer/Supplier:

Sun Gro Horticulture Canada Ltd.  
P.O. Box 189  
Seba Beach, AB T0E 2B0

### For more information call:

Western Region 1-888-797-7328  
Central Region 1-888-982-4500  
Eastern Region 1-888-896-1222  
For more information: [www.sungro.com](http://www.sungro.com)

Product uses: Horticultural and Industrial

## Section 2. Hazardous Ingredient & Composition

Component	CAS#	%	OSHA PEL		ACGIH TLV	
			Total	Respirable	Total	Respirable
Vermiculite	1318-00-9	100%	15 mg/m3	5 mg/m3	3 mg/m3	10 mg/m3
Quartz	14808-60-7	<1%	-	0.1 mg/m3*	-	0.05 mg/m3**
Asbestos (tremolite) and/or Asbestos (actinolite)	14567-73-8  13768-00-8	<1%  (total)	-	0.1 fiber/cc*	-	0.1 fiber/cc

**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)

\* See 29 CFR 1910.1000 Table Z-3 to determine the PEL for the mixture, which is related to the percent crystalline silica in the product. See 29 CFR 1910.1001 regarding the PEL for asbestos containing products.

\*\* See Appendix E “Threshold Limit Values for Mixtures” in the ACGIH publication “Chemical Substances TLV’s and BEI’s” to calculate the TLV for a mixture.

**Chemical Name:** Vermiculite is hydrated magnesium-aluminum-iron silicate mineral.

Under the OSHA Asbestos Standard, products that contain <1% asbestos are not considered to be Asbestos Containing Materials (ACM). This product complies with this definition. An independent testing laboratory conducts asbestos analyses and the data are available on request. This product may contain >0.1% crystalline silica (quartz). Quartz is a naturally occurring mineral that is the second most abundant mineral on the earth's surface. Consequently it is frequently associated with many mined materials. Crystalline silica and asbestos are considered to be carcinogenic to humans.

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### Section 3. Physical/Chemical Characteristics

<b>Physical State:</b> Solid	<b>Boiling Point:</b> > 1000° C
<b>Appearance:</b> Flakes, resembles mica	<b>Vapor Pressure:</b> Not applicable
<b>Color:</b> Tan to gray	<b>Solubility in Water:</b> Not applicable
<b>Odor:</b> None	<b>Melting point:</b> 1000° C
<b>pH:</b> Neutral	<b>Evaporation rate:</b> Not applicable
<b>Density - Expanded:</b> 55-130 g/l (3.4-8.5 lb/cf)	<b>Specific gravity:</b> Not applicable
<b>Density – Ore:</b> 800-1100 g/l (52-71.5 lb/cf)	

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### Section 4. Fire and Explosion Hazard Data

<b>Flash Point:</b> Not Applicable
<b>Flammable Limits:</b> Not Applicable
<b>Extinguishing Media:</b> Non combustible
<b>Special Fire Fighting Procedures:</b> Incombustible mineral. Vermiculite is frequently used as an insulation material for fire protection.
<b>Unusual Fire and Explosion Hazards:</b> None

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### Section 5. Stability and Reactivity

<b>Stability:</b> Stable
<b>Conditions to Avoid:</b> See label. Keep packaging away from heat, sparks and open flames.
<b>Incompatibility:</b> Hydrofluoric acid
<b>Hazardous Decomposition or Byproducts:</b> None known
<b>Polymerization:</b> Will not occur
<b>Incompatible Materials:</b> None known

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## Section 6. Health Hazard Data/First Aid Measures

- Routes of Entry:** Inhalation, open wounds and eyes
- Health Hazards:** Nuisance dust – avoid breathing dust.
- Carcinogenicity:** None known for vermiculite. Asbestos fibers and crystalline silica have been classified as “carcinogenic to humans” (Group I) by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP).
- Effects of Exposure:** Inhalation of dust in excess of the OSHA Permissible Exposure Limit (PEL) or the Threshold Limit Value (TLV) recommended by the American Conference of Governmental Hygienists (ACGIH) over long periods may cause lung damage, irritate mucous membranes and make lungs more vulnerable to respiratory disease. Pre-existing diseases of the upper respiratory tract and lungs such as bronchitis, emphysema, and asthma may be aggravated by exposure to dust.
- Emergency and First Aid Procedures:** If inhaled, provide fresh air. If eye irritation occurs, flush with water. If irritation persists, see a doctor. Keep open wounds covered and clean as suggested by any good program of hygiene.
- Other Concerns:** Keep out of reach of children and pets.

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## Section 7. Toxicological Information

**General Comments:** Inhalation of dust may irritate nose, throat and lungs. Eye contact with solids may produce irritation, tearing or blinking, reacting to a foreign body in the eye.

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## Section 8. Precautions for Safe Handling and Use/Preventative Measures

- Steps to be taken in case material is spilled:** Use methods to clean spill, such as wet sweeping, which avoid creating airborne dust.
- Waste Disposal Method:** According to EPA 40 CFR 261.3, waste of this product is not defined as hazardous. Dispose of all waste in accordance with federal, state and local regulations.
- Precautions to be taken in handling and storage:** If excessive dust is created avoid breathing dust by using adequate ventilation and/or using a NIOSH approved respirator certified to the N95 classification. Inhalation of dust may be harmful to your health.
- Other Precautions:** Protective eyewear should be worn when dust levels are high enough to cause irritation.
- Ecological Information:** Keep out of lakes, streams or ponds.

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## Section 9. Control Measures

- Respiratory Protection:** If airborne dust is created use a NIOSH approved respirator certified to the N95 classification. See 42 CFR 84 for the complete standard and certification process.
- Ventilation:** Local exhaust advisable if dust levels exceed the ACGIH-TLV or OSHA-PEL. Refer to the ACGIH publication "Industrial Ventilation" or similar publications for ventilation system design.
- Protective Gloves:** Not normally necessary but suggested in cases of open wounds that are not appropriately protected.
- Eye Protection:** Protective eyewear should be worn where dust levels are high enough to cause irritation.
- Other Protective Clothing or Equipment:** Long sleeve shirt and long pants to cover entire body where exposure will be prolonged or repeated.
- Work/Hygienic Practices:** NIOSH approved respirator, eye protection and ventilation under conditions where excessive dust is created. Open wounds should be kept clean and suitably protected.

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## Section 10. Supplemental Information

These materials are made from natural products and may contain naturally occurring microorganisms. Proper precautions are advised to prevent infection of open wounds, inhalation of excessive amounts of dust and eye irritation. The proper hygiene practices necessary to prevent health hazards from any naturally occurring substance such as soil, bark, etc., should be observed.

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