

W. R. GRACE
MATERIAL SAFETY DATA SHEET

Product Name: Microlite® Powder
MSDS ID Number: Z-01632

MSDS Date: 05/17/2004

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Microlite® Powder
MSDS Number: Z-01632
Cancelled MSDS Number: Z-01369
MSDS Date: 05/17/2004
Chemical Family Name: Dried Vermiculite Dispersions (Enoree, South Carolina Source)
Product Use: High Temperature Coating, Filler, Binder
Chemical Formula: (Li,K).(Mg,Ca,K,Fe11)3(Si,Al,Fe¹¹¹)4O₁₀(OH)₂ · H₂O
CAS # (Chemical Abstracts Service Number): 110638-71-6

Manufactured by:

W.R.Grace & Co.-Conn. 62 Whittemore Avenue Cambridge, MA 02140	Grace Canada, Inc. 294 Clements Road West Ajax, Ontario L1S 3C6
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In Case of Emergency Call:

In USA: (617) 876-1400 In Canada: (905) 683-8561

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	Percent (max)
Vermiculite Dispersion	110638-71-6	50-100
Quartz	014808-60-7	1-10

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview:

Caution!

Causes eye irritation.
Causes respiratory tract irritation
Causes digestive tract irritation if ingested.

HMIS Rating:

Health:	1
Flammability:	0
Reactivity:	0
Personal Protective Equipment:	E

Potential Health Effects:

Inhalation:

If inhaled as a dust, causes respiratory tract irritation.
Effects include: Coughing, shortness of breath, wheezing and reduced pulmonary function from pneumoconiosis (dusty lungs).

Eye Contact:

Eye contact causes irritation.

Skin Contact:

Acute skin contact is not expected to result in adverse effects.
Prolonged skin contact can result in irritation

Skin Absorption:

Not expected to be harmful if absorbed through the skin.

Ingestion:

If ingested, causes irritation to the linings of the mouth, esophagus and stomach.
Effects include: No other effects expected unless listed below.

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SECTION 4 - FIRST AID MEASURES:

Skin Contact:

Wash with soap and water.
If discomfort or irritation persists, consult a physician.
Remove contaminated clothing and wash before reuse.

Eye Contact:

Flush eyes with water for at least 15 minutes while holding eyelids open.
If discomfort or irritation persists, consult a physician.

Ingestion:

Consult a physician if symptoms develop.
Adverse health effects are not expected if swallowed.

Inhalation:

If symptoms develop, get fresh air. If symptoms persist, consult a physician.
If breathing has stopped, give artificial respiration then oxygen if needed.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point:	Not Applicable
Flash Point Method:	Not Applicable
Lower Explosion Limit:	Not Available
Upper Explosion Limit:	Not Available
Auto-Ignition Temperature:	Not Available

NFPA Rating:

Health:	0
Flammability:	0
Reactivity:	0

Extinguishing Media: Not Applicable. Product will not burn.

Special Fire Fighting Procedures:

None
No special procedures specific to this product.

Unusual Fire and Explosion Hazards:

None unless noted below.

SECTION 6 - ACCIDENTAL RELEASE MEASURES:

Spills/Leaks:

Carefully shovel or sweep up spilled material and place in suitable container for recycle or disposal.
Dampen with water spray or use other methods to clean spill which avoid creating dust. Discard empty packaging promptly. Avoid excessive handling of empty packaging, which may result in unnecessary release of airborne particulates.

SECTION 7 - HANDLING AND STORAGE

Precautionary Measures:

Avoid contact with eyes, skin and clothing.
Avoid creating and inhaling airborne dust or particulates.
Avoid water reactive chemicals.
Use only with adequate ventilation.
Wash clothing before reuse.
Provide respiratory protection if needed.
FOR PROFESSIONAL USE ONLY. KEEP OUT OF CHILDREN'S REACH.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

EXPOSURE GUIDELINES (US)

Ingredient	ACGIH TLV			OSHA PEL			Other
	TWA	STEL	Ceiling	TWA	STEL	Ceiling	
Quartz	0.05 mg/m3 TWA (respirable fraction)	-	-	respirable dust: 0.1 mg/m3 TWA	-	-	-
Vermiculite Dispersion	-	-	-	-	-	-	-

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In addition to the exposure limits referenced above, the following non-specific limits for dust apply to this product; OSHA, 15 mg/m³-TWA or Total Dust and 5 mg/m³-TWA as Respirable Dust, ACGIH, 10 mg/m³-TWA as Total Dust and 3 mg/m³-TWA as Respirable Dust.

EXPOSURE GUIDELINES (CANADA)

Employers should consult local Provincial regulatory limits for exposure guidelines which may vary locally.

Engineering Controls:

Not generally required.

Personal Protective Equipment:

Respiratory Protection: Respiratory protection may be desirable if dust is created in handling and is required at or above the Permissible Exposure Limits (PELs) specified.

Skin Protection: Gloves are recommended.

Eye Protection: Safety glasses or goggles should be worn.

Work/Hygiene Practices: Use good personal hygiene practices.

Quartz (Crystalline silica) is a naturally-occurring mineral that is commonly contained in materials that are mined from the earth's surface such as sand, limestone, clay and gypsum (Calcium sulfate). Total quartz is a value usually representing the combined fractions of large, nonrespirable sized particles and of respirable sized particles (less than ten microns in aerodynamic diameter). It is only the respirable fraction of total quartz that is recognized as hazardous by professionals in the field of Occupational Health and by most regulatory agencies.

Grace has not been able to

detect any respirable sized quartz in Microlite Powder based on industrial hygiene sampling conducted during the spray drying of this material. Due to the high volume of product handled, we believe the highest potential for exposure existed during this process.

In addition a wet sieving analysis combined with x-ray diffractometry has been conducted on vermiculite. Results indicate that respirable quartz is not present above the 0.1% by weight limit established by the Occupational Safety and Health Administration (OSHA) for carcinogens. OSHA stats that if the hazardous substance is contained in the product below 0.1% by weight and exposures do not exceed permissible exposure limits, then the hazards do not apply.

This product is a chemically delaminated vermiculite dispersed in 80-95% water. The vermiculite used in this product is a naturally-occurring mineral mined in South Carolina which contains tremolite in the ore body. Except for trace amounts, the tremolite, which is predominately non-fibrous, is removed from the vermiculite during processing.

In an effort to assure that this product is high purity, WR-Grace & Co. has retained the services of an outside independent laboratory. This laboratory has analyzed samples using a state-of-the-art electron microscope at 10,000x. Using this technique, no fibrous tremolite has been detected. This product contains compounds subject to exposure guidelines and/or identified as carcinogens. (See Sections 8 and 11).

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance/Odor:	Greenish brown platelet powder. No appreciable odor.
Odor Threshold: (ppm)	Not Determined
pH:	7.5 - 9.5
Vapor Pressure: (Mm Hg)	Unknown
Vapor Density: (Air = 1)	Unknown
Solubility In Water:	Negligible
Specific Gravity: (Water = 1)	Not Available
Evaporation Rate: (Butyl Acetate = 1)	Unknown
Boiling Point:	Not Applicable
Viscosity:	Unknown
Bulk Density: (Pounds/Cubic Foot)(Pcf)	Not Applicable
% Volatiles (gr/L): (70°F) (21°C)	Not Applicable

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SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions To Avoid: None known for this product.
Hazardous Polymerization: Will not polymerize.
Hazardous Decomposition Products: Carbon dioxide, Carbon monoxide and Acrid smoke.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ingredient(No data unless listed.) **CAS Number** **LD50 and LC50**

Carcinogenicity:

Ingredient	IARC Group 1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
Vermiculite Dispersion	No	No	No	No	No	No
Quartz	Yes	No	No	No	No	Yes

Mutagenicity: Not applicable.
Teratogenicity: Not applicable.
Reproductive Toxicity: Not applicable.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental Fate: No data available for product.
Ecotoxicity: No data available for product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Procedures:
Consult all regulations (federal, state, provincial, local) or a qualified waste disposal firm when characterizing waste for disposal. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous. Dispose of waste in accordance with all applicable regulations.
According to US EPA (40 CFR § 261.3) waste of this product is not defined as hazardous.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Not Applicable
UN/NA Number: Not Applicable
Domestic Hazard Class: Nonhazardous
Surface Freight Classification: Vermiculite, other than Crude
Label/Placard Required: Not Applicable

SECTION 15 - REGULATORY INFORMATION

REGULATORY CHEMICAL LISTS:

CERCLA (Comprehensive Response Compensation and Liability Act):
(None present unless listed below)

Chemical Name **CAS #** **Wt %** **CERCLA RQ**

SARA Title III (Superfund Amendments and Reauthorization Act)

SARA Section 312/Tier I & II Hazard Categories:

Health Immediate (acute) No
Health Delayed (chronic) No
Flammable No
Reactive No
Pressure No

302 Reportable Ingredients (Identification Threshold 1%):

Chemical Name **CAS #** **Wt %** **SARA 302 TPQ**

