

**W. R. GRACE**  
MATERIAL SAFETY DATA SHEET

Product Name: MicroWhite® Vermiculite Dispersion  
MSDS ID Number: Z-01666

MSDS Date: 09/19/2006

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** MicroWhite® Vermiculite Dispersion  
**MSDS Number:** Z-01666  
**Cancelled MSDS Number:** Z-01639  
**MSDS Date:** 09/19/2006  
**Chemical Family Name:** Chemically Delaminated Vermiculite (from South Carolina Ore Concentrate) Dispersion  
**Product Use:** High Temperature Coating, Filler, Binder  
**Chemical Formula:** Mixture-NA  
**CAS # (Chemical Abstracts Service Number):** Mixture-NA

**Manufactured by:**

W.R.Grace & Co.-Conn.  
62 Whittemore Avenue  
Cambridge, MA 02140

Grace Canada, Inc.  
294 Clements Road West  
Ajax, Ontario L1S 3C6

**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)
Quartz	014808-60-7	< 1
Titanium dioxide	013463-67-7	1-10
Vermiculite Dispersion	110638-71-6	10-25

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Caution!**

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

**HMIS Rating:**

Health: 1  
Flammability: 0  
Reactivity: 0  
Personal Protective Equipment: B (See Section 8)

**Potential Health Effects:**

**Inhalation:** Overexposure is not likely to occur unless specific use generates dust, vapors, or mist. If inhaled, causes respiratory tract irritation.  
**Eye Contact:** Eye contact causes irritation. Prolonged eye contact can result in tissue damage.  
**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: irritation or upset stomach.

**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:** Give large quantities of water to drink for dilution effect. If gastrointestinal symptoms develop, consult a physician. Never give anything by mouth to an unconscious person.

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**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**

<b>Flash Point:</b>	Not Applicable
<b>Flash Point Method:</b>	Not Applicable
<b>Lower Explosion Limit:</b>	Not Available
<b>Upper Explosion Limit:</b>	Not Available
<b>Auto-Ignition Temperature:</b>	Not Available

**NFPA Rating:**

<b>Health:</b>	1
<b>Flammability:</b>	0
<b>Reactivity:</b>	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:** Use proper personal protective equipment. Collect liquid or absorb liquid with an inert, noncombustible material and remove for disposal

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:**

Avoid contact with eyes, skin and clothing.

Do not take internally.

Practice good personal hygiene to avoid ingestion.

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	
Titanium dioxide	10 mg/m3 TWA	-	-	10 mg/m3 TWA (total dust)	-	-	-
Vermiculite Dispersion	-	-	-	-	-	-	-
Quartz	0.05 mg/m3 TWA (respirable fraction)	-	-	0.1 mg/m3 TWA (respirable dust)	-	-	-

Respirable Quartz (Crystalline silica) and Titanium dioxide can result in lung disease (i.e. silicosis and or lung cancer). However, due to the physical nature of this product (liquid) exposures are not expected unless product dries, is abraded and airborne dust is created.

**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 Limit (PEL) for nuisance particulates.

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**Skin Protection:** Gloves are recommended.

**Eye Protection:** Safety glasses or goggles should be worn.

**Work/Hygienic Practices:** Use good personal hygiene practices.

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 can contain 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. Using this technique, no fibrous tremolite has been detected.

Quartz (Crystalline silica) is a naturally occurring mineral that is 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 fraction of large non-respirable sized particles and of respirable sized particles (less than ten micros in aerodynamic diameter). It is only the respirable sized fraction of total quartz that is recognized as hazardous by professionals in the field of Occupational Health and by most regulatory agencies.

Due to the physical nature of this product, (liquid) Quartz (Crystalline silica) exposures are not expected.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid
<b>Appearance/Odor:</b>	Aqueous dispersion, white, no appreciable odor
<b>Odor Threshold:</b> (ppm)	Not Determined
<b>pH:</b>	6.5 - 8.5
<b>Vapor Pressure:</b> (Mm Hg)	20 @ 22 deg. C
<b>Vapor Density:</b> (Air = 1)	1.18 @ 22 deg. C
<b>Solubility In Water:</b>	Miscible with water
<b>Specific Gravity:</b> (Water = 1)	Not Available
<b>Evaporation Rate:</b> (Butyl Acetate = 1)	Unknown
<b>Boiling Point:</b>	212 deg. F (100 deg. C)
<b>Viscosity:</b>	Unknown
<b>Bulk Density:</b> (Pounds/Cubic Foot)(Pcf)	Not Applicable
<b>% Volatiles (gr/L):</b> (70°F) (21°C)	80 - 95 % (As water)

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable
<b>Conditions To Avoid:</b>	None known for this product.
<b>Hazardous Polymerization:</b>	Will not polymerize.
<b>Hazardous Decomposition Products:</b>	None known for this product.

**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
Titanium dioxide	No	No	Yes	No	No	No
Vermiculite Dispersion	No	No	No	No	No	No
Quartz	Yes	No	No	No	No	Yes

Respirable Quartz (Crystalline silica) and Titanium dioxide can result in lung disease (i.e. silicosis and or lung cancer). However, due to the physical nature of this product (liquid) exposures are not expected unless product dries, is abraded and airborne dust is created.

<b>Mutagenicity:</b>	Not applicable.
<b>Teratogenicity:</b>	Not applicable.
<b>Reproductive Toxicity:</b>	Not applicable.

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**SECTION 12 - ECOLOGICAL INFORMATION**

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

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**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.

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**SECTION 14 - TRANSPORTATION INFORMATION**

**Proper Shipping Name:** Not Applicable  
**UN/NA Number:** Not Applicable  
**Domestic Hazard Class:** Nonhazardous  
**Surface Freight Classification:** Silicate Solution Class 55  
**Label/Placard Required:** Not Applicable

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**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY CHEMICAL LISTS:**

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

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>CERCLA RQ</u>
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**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%):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>	<u>SARA 302 TPQ</u>
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**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

**Volatile Organic Content:** (gr/L) Not Applicable

**WHMIS Classification(s):** D2 B

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

**State Regulatory Information:**

**California Proposition 65:** This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

**Massachusetts Hazardous Substance List(Identification threshold 0.001%(1ppm)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

<u>Chemical Name</u>	<u>CAS #</u>	<u>Wt %</u>
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**Pennsylvania Hazardous Substance List(Identification threshold 0.01%):**

**Chemical Name** **CAS #** **Wt %**

**CHEMICAL INVENTORY STATUS:**

**All chemicals in this product are listed or exempt from listing in the following countries:**

<b>US</b>	<b>CANADA</b>		<b>EUROPE</b>	<b>AUSTRALIA</b>	<b>JAPAN</b>	<b>KOREA</b>	<b>PHILIPPINES</b>
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	No	Yes	Yes	No	No	No	No

**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

**Chemical Name**

**CAS Number**

**Prepared by:**

EH&S Department

**Approved by:**

EH&S Department

**Approved Date:**

09/19/2006

**Disclaimer:**

"The data included herein are presented in accordance with various environment, health and safety regulations. It is the responsibility of a recipient of the data to remain currently informed on chemical hazard information, to design and update its own program and to comply with all national, federal, state and local laws and regulations applicable to safety, occupational health, right-to-know and environmental protection."