

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

Product Name: Monokote Type Z-106 G  
MSDS ID Number: Z-01749

MSDS Date: 07/11/2008

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

**Product Name:** Monokote Type Z-106  
**MSDS Number:** Z-01749  
**Cancelled MSDS Number:** Z-01724  
**MSDS Date:** 07/11/2008  
**Chemical Family Name:** Lightweight Gypsum Aggregate Plaster  
**Product Use:** Fireproofing Product.  
**Chemical Formula:** Blend of Gypsum, Clay, Styrene Polymer & Cellulose  
**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**

<b>Ingredient</b>	<b>CAS#</b>	<b>Percent (max)</b>
Calcium sulfate	007778-18-9	50-100
Fuller's earth	008031-18-3	1-10
Polystyrene	009003-53-6	1-10
Pulp, cellulose	065996-61-4	1-10
Quartz	014808-60-7	1-10

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Warning!**

Irritating to eyes, skin and respiratory system.

Prolonged exposure may cause risk of lung disease (i.e. silicosis and/or lung cancer)

**HMIS Rating:**

Health: 1\*  
Flammability: 0  
Reactivity: 0  
Personal Protective Equipment: B,E (See Section 8)

**Potential Health Effects:**

**Inhalation:** Causes respiratory tract irritation.

Exposure may aggravate chronic respiratory conditions such as asthma or bronchitis. Long-term inhalation of dust may increase risk of contracting pneumoconiosis ("dusty lungs") and reduced pulmonary function.

Prolonged inhalation of respirable crystalline silica dust can result in lung disease (i.e. silicosis and/or lung cancer). Symptoms include coughing, shortness of breath, wheezing and reduced pulmonary function.

**Eye Contact:** Eye contact causes irritation.

Direct contact with Monokote spray may cause physical injury.

**Skin Contact:** Skin contact causes irritation.

May dry skin.

During hardening (rehydration) this product may slowly develop sufficient heat to cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or while in continuous, prolonged contact with the skin.

**Skin Absorption:** Not expected to be harmful if absorbed through the skin.

**Ingestion:** Ingestion not expected to be harmful

**SECTION 4 - FIRST AID MEASURES:**

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**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:** Do not induce vomiting.  
Never give anything by mouth to an unconscious person.  
If discomfort or irritation persists, consult a physician.  
**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:**  
**Flammability:**  
**Reactivity:**  
**Extinguishing Media:** Not Applicable. Product will not burn.  
**Special Fire Fighting Procedures:** None  
**Unusual Fire and Explosion Hazards:** None unless noted below.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES:**

**Spills/Leaks:** If spilled, prevent material from entering water systems. Observing the listed Precautionary Measures found in Section 7 of this document. Dry spills should be immediately swept up and placed in a suitable container to prevent further release of material. Slurry spills should be immediately contained (to minimize the extent of the spill) and absorbed with an inert, non-combustible material. Place material in a suitable container to prevent further release. Use proper personal protective equipment. Do not flush to sewer or allow to enter waterways.

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:** Avoid contact with eyes, skin and clothing.  
Wear skin and eye protection to avoid contact with dust or spray.  
Do not take internally.  
Practice good personal hygiene to avoid ingestion.  
Use only with adequate ventilation.  
Wash clothing before reuse.  
Equip mixers with dust covers.  
Provide respiratory protection if needed.  
Post "Slippery When Wet" signs where appropriate.  
Use anti-slip surfaces on working platforms.  
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	
Calcium sulfate	10 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica)	-	-	15 mg/m3 TWA; 5 mg/m3 TWA (respirable fraction)	-	-	-
Fuller's earth	-	-	-	-	-	-	-
Pentane	600 ppm TWA	-	-	600 ppm TWA; 1800 mg/m3 TWA	750 ppm STEL; 2250	-	-

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					mg/m3 STEL		
Polystyrene	-	-	-	-	-		-
Portland cement	10 mg/m3 TWA (particulate matter containing no asbestos and < 1% crystalline silica)	-	-	10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)	-		-
Pulp, cellulose	-	-	-	-	-		-
Quartz	0.025 mg/m3 TWA (respirable fraction)	-	-	((250)/(%SiO <sub>2</sub> + 5) mppcf TWA (respirable)); ((10)/(%SiO <sub>2</sub> + 2) mg/m3 TWA (respirable)); ((30)/(%SiO <sub>2</sub> + 2) mg/m3 TWA (total dust))	-	-	

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

**EXPOSURE GUIDELINES (CANADA)**

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

**Engineering Controls:** Exhaust fans may be necessary when mixing in enclosed areas.

**Personal Protective Equipment:**

**Respiratory Protection:** Wear approved respiratory protection (generally a N-95 dust mask) to prevent employee exposure from exceeding the limits specified.

**Skin Protection:** Work gloves or hand creams are recommended to prevent drying of skin.

**Eye Protection:** At minimum, safety glasses with side shields should be worn where exposure to excessive dust or spray is likely.

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

Use bag opening and disposal procedures which minimize dust release. Equip mixers with dust covers to minimize dust released during mixing cycle. After each work shift, workers should shower with soap and water. Work clothing should be changed daily.

Remove material in a manner so as to minimize the creation of dust. All trades should minimize the release of dust during removal of materials by:

- Applying a spray mist of water to wet product, prior to its removal.
- Removing small areas of fireproofing at one time.
- Maintaining a clean worksite.

Prior to welding or cutting, product must be removed from steel surfaces in those immediate areas where exposure to excessive heat, applied either directly or through conduction, from cutting or welding operations is possible.

Portland Cement may contain trace amounts of heavy metals recognized as carcinogens by NTP, OSHA or IARC.

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. Clay contained in this product may contain very small particles which might be described as microfibrinous (0.02-0.1 Åm diameter and 0.1-2.5 Åm in length with a mean particle length of 0.4 Åm). These particles are not regulated. Studies to date show that these particles are not fibrogenic nor carcinogenic and unlikely to cause pulmonary dysfunction.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Solid
<b>Appearance/Odor:</b>	Coarse, free flowing white to black powder, no odor.
<b>Odor Threshold:</b> (ppm)	Not Determined
<b>pH:</b>	Approx. Neutral. Varies with water
<b>Vapor Pressure:</b> (Mm Hg)	Not Applicable
<b>Vapor Density:</b> (Air = 1)	Not Applicable
<b>Solubility In Water:</b>	Slight
<b>Specific Gravity:</b> (Water = 1)	Not Applicable
<b>Evaporation Rate:</b> (Butyl Acetate = 1)	Not Applicable
<b>Boiling Point:</b>	Not Applicable
<b>Viscosity:</b>	Unknown
<b>Bulk Density:</b> (Pounds/Cubic Foot)(Pcf)	12-16 PCF
<b>% Volatiles (gr/L):</b> (70°F)(21°C)	Not Applicable

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Stable
<b>Conditions To Avoid:</b>	Polyunsaturated liquids.
<b>Hazardous Polymerization:</b>	Will not polymerize.
<b>Hazardous Decomposition Products:</b>	Carbon dioxide, Carbon monoxide and Monomers (C <sub>8</sub> H <sub>8</sub> ) and various polymers (C <sub>8</sub> H <sub>8</sub> ). Temperatures in excess of 4000°F from cutting or welding operations may generate Sulfur dioxide. Upon complete combustion, Carbon monoxide and Carbon dioxide are released.

**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
Calcium sulfate	No	No	No	No	No	No
Fuller's earth	No	No	No	No	No	No
Polystyrene	No	No	No	No	No	No
Pulp, cellulose	No	No	No	No	No	No
Quartz	Yes	No	No	Yes	No	Yes

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

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Environmental Fate:</b>	No data available for product.
<b>Ecotoxicity:</b>	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. Wastes of this product such as empty bags and excess material are typically not defined as hazardous.

**SECTION 14 - TRANSPORTATION INFORMATION**

<b>Proper Shipping Name:</b>	Not Applicable
<b>UN/NA Number:</b>	Not Applicable
<b>Domestic Hazard Class:</b>	Nonhazardous
<b>Surface Freight Classification:</b>	Wall plaster
<b>Label/Placard Required:</b>	Not Applicable

**SECTION 15 - REGULATORY INFORMATION****REGULATORY CHEMICAL LISTS:**

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

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<b><u>Chemical Name</u></b>	<b><u>CAS #</u></b>	<b><u>Wt %</u></b>	<b><u>CERCLA RQ</u></b>
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**SARA Title III (Superfund Amendments and Reauthorization Act)**

**SARA Section 312/Tier I & II Hazard Categories:**

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

**302 Reportable Ingredients (Identification Threshold 1%):**

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

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

**Volatile Organic Content:** (gr/L)                      0

**WHMIS Classification(s):**    D2 A

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:**

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**California Proposition 65:**    WARNING! 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)):**

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<b><u>Chemical Name</u></b>	<b><u>CAS #</u></b>	<b><u>Wt %</u></b>	
Quartz	014808-60-7	4.18	

**New Jersey Hazardous Substance List(Identification threshold (0.1%)):**

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

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<b><u>Chemical Name</u></b>	<b><u>CAS #</u></b>	<b><u>Wt %</u></b>	
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**CHEMICAL INVENTORY STATUS:**

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

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

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**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

<b><u>Chemical Name</u></b>	<b><u>CAS Number</u></b>
Prepared by:	EH&S Department
Approved by:	EH&S Department
Approved Date:	07/11/2008

**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."