

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

Product Name: Monokote Type MK-6S  
MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

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

**Product Name:** Monokote Type MK-6S  
**MSDS Number:** Z-01744  
**Cancelled MSDS Number:** Z-01722  
**MSDS Date:** 07/11/2008  
**Chemical Family Name:** Lightweight Gypsum Aggregate Plaster  
**Product Use:** Fireproofing Product.  
**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**

| <b>Ingredient</b>     | <b>CAS#</b> | <b>Percent (max)</b> |
|-----------------------|-------------|----------------------|
| Calcium sulfate       | 007778-18-9 | 50-100               |
| Cellulose.            | 009004-34-6 | 1-10                 |
| Fuller's earth (Clay) | 008031-18-3 | 1-10                 |
| Polystyrene           | 009003-53-6 | 1-10                 |
| Quartz                | 014808-60-7 | 1-10                 |

**SECTION 3 - HAZARDS IDENTIFICATION**

**Emergency Overview:**

**Caution!**

May cause eye, skin, and respiratory irritation.

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 (See Section 8)

**Potential Health Effects:**

**Inhalation:** May be irritating if inhaled resulting in coughing and sneezing.

May aggravate chronic respiratory conditions such as asthma or bronchitis.

Long term inhalation of dust may increase risk of contracting pneumoconiosis ("dusty lungs") and decrease lung 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 may cause irritation.

**Skin Contact:** Skin contact may cause irritation.

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

Product Name: Monokote Type MK-6S

MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

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.

May dry skin.

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

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

Effects include: No other effects expected unless listed below.

---

**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:** 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:** 1

**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:** Use proper personal protective equipment. Do not flush to sewer or allow to enter waterways. Keep unnecessary people away.

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.

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

Product Name: Monokote Type MK-6S  
 MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

**SECTION 7 - HANDLING AND STORAGE**

**Precautionary Measures:** Avoid contact with eyes, skin and clothing.  
 Avoid creating and inhaling airborne dust or particulates.  
 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.  
 Wear skin and eye protection to avoid contact with dust or spray.  
 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<br>(particulate matter containing no asbestos and < 1% crystalline silica) | -    | -       | 15 mg/m3 TWA; 5 mg/m3 TWA (respirable fraction)  | -                                | -       | -     |
| Cellulose       | -   | -    | -       | -  | -                                | -       | -     |
| Fuller's earth  | -   | -    | -       | -  | -                                | -       | -     |
| Pentane         | 600 ppm TWA   | -    | -       | 600 ppm TWA; 1800 mg/m3 TWA  | 750 ppm STEL;<br>2250 mg/m3 STEL | -       | -     |
| Polystyrene     | -   | -    | -       | -  | -                                | -       | -     |
| 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/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:** 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 in Section 2.

**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.

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

Product Name: Monokote Type MK-6S

MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

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.

All trades should minimize the release of dust during removal of materials by:

Wetting using water, prior to its removal.

Removing small areas of fireproofing at one time.

Maintaining a clean worksite.

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  $\mu$ m diameter and 0.1-2.5  $\mu$ m in length with a mean particle length of 0.4  $\mu$ m). These particles are not regulated. Studies to date show that these particles are not fibrogenic nor carcinogenic and unlikely to cause pulmonary dysfunction.

---

**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: (ppm)</b>                  | Not Determined                                       |
| <b>pH:</b>                                    | Not Available  |
| <b>Vapor Pressure: (Mm Hg)</b>                | Unknown  |
| <b>Vapor Density: (Air = 1)</b>               | Unknown  |
| <b>Solubility In Water:</b>                   | Unknown  |
| <b>Specific Gravity: (Water = 1)</b>          | Not Available  |
| <b>Evaporation Rate: (Butyl Acetate = 1)</b>  | Unknown  |
| <b>Boiling Point:</b>                         | Not Applicable                                       |
| <b>Viscosity:</b>                             | Unknown  |
| <b>Bulk Density: (Pounds/Cubic Foot)(Pcf)</b> | 12-16 PCF  |
| <b>% Volatiles (gr/L): (70°F)(21°C)</b>       | Not Available  |

---

**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 (C8H8) and various polymers (C8H8). 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. |

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

Product Name: Monokote Type MK-6S  
MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

**SECTION 11 - TOXICOLOGICAL INFORMATION**

|  |                          |   |
|--|--------------------------|---|
| <b><u>Ingredient(No data unless listed.)</u></b> | <b><u>CAS Number</u></b> | <b><u>LD50 and LC50</u></b>   |
| Cellulose.                                       | 009004-34-6              | Inhalation LC50 Rat: >5800 mg/m <sup>3</sup> /4H;<br>Oral LD50 Rat: >5 g/kg;<br>Dermal LD50 Rabbit: >2 g/kg |

**Carcinogenicity:**

| Ingredient      | IARC Group 1 | IARC Group 2A | IARC Group 2B | NTP Known | NTP Suspect | OSHA |
|-----------------|--------------|---------------|---------------|-----------|-------------|------|
| Calcium sulfate | No           | No            | No            | No        | No          | No   |
| Cellulose.      | No           | No            | No            | No        | No          | No   |
| Fuller's earth  | No           | No            | No            | No        | No          | No   |
| Polystyrene     | 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)**

|                             |                     |                    |                         |
|-----------------------------|---------------------|--------------------|-------------------------|
| <b><u>Chemical Name</u></b> | <b><u>CAS #</u></b> | <b><u>Wt %</u></b> | <b><u>CERCLA RQ</u></b> |
|-----------------------------|---------------------|--------------------|-------------------------|

**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%.):**

W. R. GRACE  
MATERIAL SAFETY DATA SHEET

Product Name: Monokote Type MK-6S  
MSDS ID Number: Z-01744

MSDS Date: 07/11/2008

Chemical Name CAS # Wt % SARA 302 TPQ

**313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):**

Chemical Name CAS # Wt %

**National Volatile Organic Compound Emission Standards For Architectural Coatings:**

Volatile Organic Content: (gr/L) 0

**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:** 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)):**

Chemical Name CAS # Wt %  
Quartz 014808-60-7 4.189

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

Chemical Name CAS # Wt %  
Pentane 000109-66-0 .117

**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:

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

**SECTION 16 - OTHER INFORMATION**

**Non-Hazardous Ingredient Disclosure:**

Chemical Name CAS Number  
Prepared by: EH&S Department  
Approved by: EH&S Department  
Approved Date: 07/11/2007

**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."