

MATERIAL SAFETY DATA SHEET

Resco Products, Inc.
Penn Center West
Building 2, Suite 430
Pittsburgh, PA 15276
Emergency Telephone No.:412-494-4491

Prepared By: Research & Development
Telephone No: 336-299-1441 Ext. 20
Date: 09/23/04
Supersedes Date: 05/01/02

Section 1 – Product Name

Common Name: Fired Magnesia-Dolomite Brick
Intended Use: Refractory Material
Product Name: QMG 20B
Brand Code: Not Applicable

Section 2 – Composition and Information on Ingredients

| <u>Ingredient</u> | <u>CAS No.</u> | <u>% Weight</u> | <u>OSHA PEL</u> | <u>ACGIH TLV</u> | <u>Sec. 313</u> |
|-------------------|----------------|-----------------|-------------------------------------|-----------------------------------|-----------------|
| Magnesium Oxide | 1309-48-4 | 15-40 | 5 mg/m ³ (Respirable) | 10 mg/m ³ (As Fume) | No |
| Dolomite | 16389-88-1 | 40-70 | Not Established | Not Established | No |
| Paraffin Wax | 8002-74-2 | 1-5 | Not Established | 2 mg/m ³ | No |

Notes: (1) The PEL and TLV values shown above are 8-hour time-weighted averages, unless otherwise specified. "Not Established" means that no PEL or TLV has been assigned.

Section 3 – Hazards Identification

No unusual spill hazard. Dusts may be irritating to skin, eyes and mucous membranes. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion. Do not breath vapors generated when product is first subjected to high temperatures during "burn in" for service.

Primary Routes of Entry for Particulate:

| | | | |
|--------------------|-----|-------------------|----|
| Inhalation: | Yes | Other: | No |
| Skin: | Yes | Ingestion: | No |

Potential Adverse Health Effects:

Acute: Eye: Dusts of this product may be irritating.
Skin: Dusts of this product may cause skin irritation.
Inhalation: Dusts of this product may be irritating to respiratory tract.

Chronic: Eye: Dusts of this product may cause reddening or swelling of the eye.
Skin: Dusts of this product may cause a skin rash (dermatitis).
Inhalation: Prolonged or repeated inhalation of dusts of this product in excess of the stated PEL or TLV may cause lung disease

Carcinogenicity: None of the ingredients in Section 2 are listed by IARAC, NTP, or ACGIH as carcinogens or potential carcinogens.

Signs and Symptoms of Overexposure: Skin rash can result from handling. Coughing can result from overexposure to dust.

Medical Conditions Generally Aggravated by Exposure to Particles: Pre-existing diseases or other conditions of the lungs, skin, eyes, and mucous membranes.

Section 4- First Aid Measures

Eye Contact: Flush product from eyes using large amounts of water. If irritation continues, seek medical attention.

Skin Contact: Wash product from skin using soap and water. If irritation continues, seek medical attention.

Inhalation: If exposed to excessive levels of dusts or vapors during heating, remove victim to fresh air. Seek medical attention if coughing or other symptoms persist.

Ingestion: As shipped, product not likely to be ingested; but if it occurs, do not induce vomiting. Seek medical attention.

Section 5 – Fire Fighting Measure

Flash Point: Not Applicable

Flammable Limits: Not Applicable

Product Name: QMG 20B

Date: 09/23/04

LEL: Not Applicable

UEL: Not Applicable

Autoignition Temperature: Not Applicable

Extinguishing Media: Use dry chemical powders, water fog, or carbon dioxide.

Fire Fighting Instructions: As appropriate for surrounding fire.

Fire Fighting Equipment: Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing (bunker gear) when fighting fires.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide

Flame Propagation or Burning Rate of Solid Material: Not Applicable

Flammability Classification (As defined by 29 CFR 1910.1200): Not Flammable

Section 6 – Accidental Release Measures

For brick products, spills are remedied by recovering and re-stacking the shapes. If dusts are generated during the spill, these should be collected by gently sweeping the material into a dustpan or collecting with a vacuum device. All personnel engaged in cleanup operations should adhere to the instructions outlined in Section 8 for personal protection. Disposal of wastes from cleanup operations should be carried out in accordance with the guidelines outlined in Section 13.

Section 7 – Handling and Storage

Handling: Avoid direct contact with product or dusts from product by wearing protective clothing, using approved respiratory protection and wearing gloves of the impermeable type.

Storage: The product should be stored in a dry location and away from sources of heat (furnaces, boilers, incinerators, etc.). Pallet protection such as shrink-wrap or stretch-wrap should be kept in place until the product is required for installation.

Section 8 – Exposure Control/Personal Protection

Engineering Controls: Process enclosures, local exhaust ventilation, or other engineering process controls may be necessary to keep any air contaminants associated with this product within their TLV's. This is particularly true if user operation generates dust.

Respiratory Protection: Since this product is a proprietary mixture of unique ingredients, it does not have an established limit for airborne concentration (PEL or TLV), which workers can routinely be exposed to without suffering adverse health effects. This MSDS is prepared to alert customers and other users to the various components of the product and their relative quantity and toxicity in the product as it is provided. The user must review his/her own circumstances and then determine what is required to establish a respiratory protection program that meets OSHA 1910.134 requirements. If workplace conditions warrant respiratory protection, use MSHA/NIOSH approved units as listed in the current 29 DFR 1910.134 for the existing conditions. Some type of respiratory protection is recommend for even the best conditions. Actual respirator selection should be made after consultation with a competent health and safety professional.

Eye Protection: Industrial type safety glasses offer some protection. Goggles or full face-piece respirators offer more protection.

Protective Gloves As needed to prevent direct skin contact.

Other Protective Clothing or Equipment: Wear clothing designed to limit direct exposure to product or dusts associated with product. If clothing becomes contaminated, it should be laundered before wearing again. Barrier skin creams may be applied to parts of the body not otherwise protected, if workers find this beneficial. Maintain good personal hygiene. Wash hands thoroughly before eating or drinking.

Section 9 – Physical and Chemical Properties

Appearance: Brick/Shapes, Light Brown Color

Odor: None

Water Solubility: None

Density (H₂O=1): 3.0

% Volatile (By Weight): 0

Vapor Pressure (mm Hg): Not Applicable

Vapor Density (Air=1): Not Applicable

pH (10% solids): Not Applicable

Boiling Point (°C): Not Applicable

Melting Point: Not Applicable

Evaporation Rate: Not Applicable

Section 10 – Stability and Reactivity

Chemical Stability: This product is stable under normal and/or anticipated conditions for shipping, storage and installation.

Conditions to Avoid: None

Incompatible Material: Strong oxidizing agents, May react with Strong Acids, such as Hydrofluoric Acid.

Hazardous Decomposition or Combustion Products: Carbon monoxide, carbon dioxide

Hazardous Polymerization: Not Applicable

Reactivity: None

Section 11 – Toxicological Information

| | LD ₅₀ | CD ₅₀ |
|----------------------------|-------------------------|------------------|
| Magnesium Oxide | No Data | No Data |
| Dolomite | No Data | No Data |
| Paraffin Wax | No Data | No Data |
| Target Organs | | |
| Magnesium Oxide | Respiratory | |
| Dolomite | Respiratory | |
| Paraffin Wax | Respiratory, Skin, Eyes | |
| Long Term Toxicity | | |
| Magnesium Oxide | No Data | |
| Dolomite | No Data | |
| Paraffin Wax | No Data | |
| Short Term Toxicity | | |
| Magnesium Oxide | No Data | |
| Dolomite | No Data | |
| Paraffin Wax | No Data | |

Section 12 – Ecotoxicological Information

Accidental Release: No information has been developed regarding the ecotoxicity or environmental fate of this product.

Section 13 – Disposal Considerations

Waste Disposal Method: The as-manufactured refractory or dust from this material is not considered a hazardous waste as defined by 40 CFR 261. However, used product (and dusts generated during maintenance and tear-out operations) may be contaminated with other hazardous substances from the particular application (for example, metals). Therefore, appropriate waste analysis may be necessary to determine proper disposal. A qualified environmental professional in accordance with applicable federal, state, and local regulations should determine waste characterization and disposal/treatment methods.

Section 14 – Transport Information

DOT (Department of Transportation) Classification under 49 CFR 172.101: Not Regulated

UN (United Nations) Number: Not Applicable

NA (North American) Number: Not Applicable

Section 15 – Regulatory Information

Resco Products, Inc. considers this product to be hazardous as defined by the OSHA Hazardous Communications Standard (29 CFR 1910.1200). Section 2 chemicals, which must be addressed, and the summary of regulatory and other lists upon which they appear are:

| Ingredient | CAS Number | List (s) |
|-----------------|------------|----------|
| Magnesium Oxide | 1309-48-4 | 1,2,3,4 |
| Dolomite | 16389-88-1 | 4 |
| Paraffin Wax | 8002-74-2 | 1,3,4 |

The lists are as follows:

1. ACGIH TLV "Threshold Limit Values" (1997)
2. OSHA Air Contaminants – Permissible Exposure Limits (1989)
3. Canadian Domestic Substances List
4. EPA TSCA Chemical Inventory List (1992)

WHMIS Hazard Class (Canada): D2A

SARA Title III:

Section 302 Extremely Hazardous: None

Section 313 Toxic Chemicals: See Section 2

Section 16 – Other Information

This information and recommendations set forth herein are taken from sources believed to be accurate as of the date herein; however, Resco Products, Inc. makes no warranty with respect to the accuracy of the information or the suitability of the recommendations, and assumes no liability to any user thereof.