1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier
Product name: MINE GROUT MG-M
Synonyms: MINE GROUT MG-M

1.2 Uses and uses advised against
Uses: GROUT

1.3 Details of the supplier of the product
Supplier name: BORAL AUSTRALIA
Address: Level 18, 15 Blue Street, North Sydney, NSW, 2060, AUSTRALIA
Telephone: (02) 9220 6300
Website: http://www.boral.com.au

1.4 Emergency telephone numbers
Emergency: 1800 555 477 (8am – 5pm WST)
Emergency (A/H): 13 11 26 (Poisons Information Centre)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

Physical Hazards
Not classified as a Physical Hazard

Health Hazards
Skin Corrosion/Irritation: Category 2
Serious Eye Damage / Eye Irritation: Category 2A
Specific Target Organ Toxicity (Single Exposure): Category 3 (Respiratory Irritation)
Specific Target Organ Toxicity (Repeated Exposure): Category 2

Environmental Hazards
Not classified as an Environmental Hazard

2.2 GHS Label elements
Signal word: WARNING

Hazard statements
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.
- H373: May cause damage to organs through prolonged or repeated exposure.
Prevention statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response statements
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P338 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P314 Get medical advice/attention if you feel unwell.
P321 Specific treatment is advised - see first aid instructions.
P362 Take off contaminated clothing and wash before re-use.

Storage statements
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal statements
P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other hazards
No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>PORTLAND CEMENT</td>
<td>65997-15-1</td>
<td>266-043-4</td>
<td>10 to 30%</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>1305-62-0</td>
<td>215-137-3</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>QUARTZ (CRYSTALLINE SILICA)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>HEXAVALENT CHROMIUM</td>
<td>18540-29-9</td>
<td>-</td>
<td>&lt;0.002%</td>
</tr>
<tr>
<td>CALCIUM SULPHATE HEMIHYDRATE</td>
<td>26499-65-0</td>
<td>607-950-0</td>
<td>30 to 60%</td>
</tr>
<tr>
<td>ASHES (RESIDUES)</td>
<td>68131-74-8</td>
<td>268-627-4</td>
<td>10 to 30%</td>
</tr>
<tr>
<td>LIGNOSULPHATE</td>
<td>-</td>
<td>-</td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>

Ingredient Notes
1. Depending upon the source material, may contain varying amounts of respirable quartz (crystalline silica).
2. Chromium VI is a trace impurity in Portland Cement (< 20 ppm).

4. FIRST AID MEASURES

4.1 Description of first aid measures
Eye If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities
Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed
Irritating to the eyes, skin and respiratory system. Chronic over exposure to silica quartz dust may result in silicosis (lung disease). Principal symptoms of silicosis are coughing and breathlessness. Some individuals may exhibit an allergic response upon exposure to this product, possibly due to the trace amounts of chromium present. Crystalline silica and hexavalent chromium compounds are classified as carcinogenic to humans (IARC Group 1).

4.3 Immediate medical attention and special treatment needed
Treat symptomatically.
5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture
Non flammable. May evolve toxic gases if strongly heated.

5.3 Advice for firefighters
No fire or explosion hazard exists.

5.4 Hazchem code
None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then collect and place in suitable containers for reuse or disposal. Avoid generating dust.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, removed from moisture, incompatible substances and foodstuffs. Ensure packages are adequately labelled, protected from physical damage and sealed when not in use.

7.3 Specific end uses
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Exposure standards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Calcium hydroxide</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>5</td>
</tr>
<tr>
<td>Calcium hydroxide</td>
<td>SWA [Proposed]</td>
<td>--</td>
<td>1</td>
</tr>
<tr>
<td>Chromium (VI) (as Cr)</td>
<td>SWA [Proposed]</td>
<td>--</td>
<td>7E-6</td>
</tr>
<tr>
<td>Chromium (VI) compounds (as Cr)</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>0.05</td>
</tr>
<tr>
<td>Portland Cement</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>10</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>SWA [AUS]</td>
<td>--</td>
<td>0.1</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>SWA [Proposed]</td>
<td>--</td>
<td>0.05</td>
</tr>
<tr>
<td>Quartz (respirable dust)</td>
<td>WorkSafe VIC</td>
<td>--</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Biological limits
No biological limit values have been entered for this product.
8.2 Exposure controls

Engineering controls
Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE
Eye / Face
Wear safety glasses or dust-proof goggles when handling material to avoid contact with eyes.

Hands
Wear PVC, rubber or cotton gloves when handling material to prevent skin contact.

Body
Wear long sleeved shirt and full-length trousers.

Respiratory
Where an inhalation risk exists wear a Class P1 (Particulate) respirator, dependent on a site specific risk assessment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>GREY TO OFF-WHITE POWDER</td>
</tr>
<tr>
<td>Odour</td>
<td>SLIGHT SWEET ODOUR</td>
</tr>
<tr>
<td>Flammability</td>
<td>NON FLAMMABLE</td>
</tr>
<tr>
<td>Flash point</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Boiling point</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Melting point</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>pH</td>
<td>11 to 13</td>
</tr>
<tr>
<td>Vapour density</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>SLIGHTLY SOLUBLE</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>NOT RELEVANT</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

9.2 Other information
Density
1700 kg/m³ to 1900 kg/m³

10. STABILITY AND REACTIVITY

10.1 Reactivity
Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Hazardous polymerisation is not expected to occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), ethanol, acids (e.g. hydrofluoric acid) and interhalogens (e.g. chlorine trifluoride). Water contact may increase product temperature 2°C to 3°C.
11.  TOXICOLOGICAL INFORMATION

11.1  Information on toxicological effects

Acute toxicity
No known toxicity data is available for this product. Based on available data, the classification criteria are not met.

Information available for the ingredients:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>7300 mg/kg (mouse)</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Skin
Irritating to the skin. Contact with powder or wetted form may result in irritation, rash and dermatitis.

Eye
Causes serious eye damage. Contact with moisture in the eyes may result in irritation, lacrimation, pain, redness, conjunctivitis and possible alkaline burns aided by mechanical irritation and abrasion.

Sensitisation
Not classified as causing respiratory sensitisation. However, some individuals may exhibit an allergic response upon exposure to cement, possibly due to trace amounts of chromium.

Mutagenicity
Insufficient data available to classify as a mutagen.

Carcinogenicity
This product contains crystalline silica and trace amounts of hexavalent chromium compounds which are classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer from exposure to crystalline silica is increased in persons with silicosis. Therefore preventing the onset of silicosis will also reduce the cancer risk.

Reproductive
Insufficient data available to classify as a reproductive toxin.

STOT - single exposure
Irritating to the respiratory system. Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.

STOT - repeated exposure
Repeated exposure to respirable silica may result in pulmonary fibrosis (silicosis). Silicosis is a fibronodular lung disease caused by deposition in the lungs of fine respirable particles of crystalline silica. Principal symptoms of silicosis are coughing and breathlessness. In the wet state, the likelihood of an inhalation hazard is reduced.

Aspiration
This product is a solid and aspiration hazards are not expected to occur.

12.  ECOLOGICAL INFORMATION

12.1  Toxicity
May be harmful to the aquatic environment due to the alkaline nature of the product. This product is non-toxic to aquatic organisms when present as a cured solid.

12.2  Persistence and degradability
Product is persistent and would have a low degradability.

12.3  Bioaccumulative potential
No data were identified for this substance.

12.4  Mobility in soil
A low mobility would be expected in a landfill situation.

12.5  Other adverse effects
Avoid contamination of drains and waterways.

13.  DISPOSAL CONSIDERATIONS

13.1  Waste treatment methods

Waste disposal
Reuse or recycle where possible. Alternatively, ensure product is covered with moist soil to prevent dust generation and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).

Legislation
Dispose of in accordance with relevant local legislation.

14.  TRANSPORT INFORMATION
NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

<table>
<thead>
<tr>
<th></th>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14.1 UN Number</strong></td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
<tr>
<td><strong>14.2 Proper Shipping Name</strong></td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
<tr>
<td><strong>14.3 Transport hazard class</strong></td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
<tr>
<td><strong>14.4 Packing Group</strong></td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
</tbody>
</table>

**14.5 Environmental hazards**

No information provided.

**14.6 Special precautions for user**

Hazchem code: None allocated.

15. REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Poison schedule: A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications: Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

Inventory listings: AUSTRALIA: AICS (Australian Inventory of Chemical Substances)

All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

**Additional information**

CEMENT CONTACT DERMATITIS: Individuals using wet cement, mortar, grout or concrete could be at risk of developing cement dermatitis. Symptoms of exposure include itchy, tender, swollen, hot, cracked or blistering skin with the potential for sensitisation. The dermatitis is due to the presence of soluble (hexavalent) chromium.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.
Abbreviations

ACGIH  American Conference of Governmental Industrial Hygienists
CAS #  Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS   Central Nervous System
EC No. EC No - European Community Number
EMS   Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS   Globally Harmonized System
GTEPG Group Text Emergency Procedure Guide
IARC  International Agency for Research on Cancer
LC50  Lethal Concentration, 50% / Median Lethal Concentration
LD50  Lethal Dose, 50% / Median Lethal Dose
mg/m³ Milligrams per Cubic Metre
OEL   Occupational Exposure Limit
pH    relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm   Parts Per Million
STEL  Short-Term Exposure Limit
STOT-RE Specific target organ toxicity (repeated exposure)
STOT-SE Specific target organ toxicity (single exposure)
SUSMP Standard for the Uniform Scheduling of Medicines and Poisons
SWA   Safe Work Australia
TLV   Threshold Limit Value
TWA   Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ("SDS").

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

Prepared by

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmtglobal.com

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