1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name: QUARRY PRODUCTS
Synonyms: AGGREGATES ● AGRICULTURAL USE ● ARMOR ROCK ● BALLAST ● CAPPING ● DRAINAGE AGGREGATES ● FILL ● GABION ● GARDENING APPLICATIONS ● LANDSCAPING ● ROAD BASE ● SPALLS

1.2 Uses and uses advised against

Uses: INDUSTRIAL APPLICATIONS

1.3 Details of the supplier of the product

Supplier name: BORAL AUSTRALIA
Address: Level 3, 40 Mount Street, Nth Sydney, NSW, 2060, AUSTRALIA
Telephone: (02) 9220 6300
Email: sds@rnt.com.au
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

GHS classifications: Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

2.2 Label elements

Signal word: WARNING

Pictograms: 

Hazards statements:
H373: May cause damage to organs through prolonged or repeated exposure.

Prevention statements:
P260: Do not breathe dust/fume/gas/mist/vapours/spray.

Response statements:
P314: Get medical advice/attention if you feel unwell.

Storage statements:
None allocated.

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

2.3 Other hazards

The hazard information provided in this Safety Data Sheet applies to the dusts within Quarry Products and particularly inhalable dust particles with a diameter less than 75 microns.
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>AGGREGATE CONTAINING QUARTZ (CRYSTALLINE SILICA)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>&lt;100%</td>
</tr>
</tbody>
</table>

Ingredient Notes

1. Quarry Products are supplied from naturally occurring materials excavated and processed at sand pits, gravel pits and hard rock quarries. Depending upon the source materials, the quarry product may contain varying amounts of quartz (crystalline silica).

2. Although rare, some Quarry Products may contain trace amounts (<0.01% w/w) of Respirable Elongated Mineral Particulates (REMP). The levels of naturally occurring asbestiform minerals within the REMP are determined to be well below the threshold level for classification.

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 Health Professional, or for at least 15 minutes.

Inhalation If inhaled, remove from contaminated area.

Skin If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water till dust removed.

Ingestion Due to product form and application, ingestion is considered unlikely.

First aid facilities Eye wash facilities and safety shower are recommended.

4.2 Most important symptoms and effects, both acute and delayed

Chronic exposure to respirable crystalline silica may result in lung fibrosis (silicosis). Principal symptoms of silicosis are cough and breathlessness. Crystalline silica is classified as carcinogenic to humans (IARC Group 1).

Chronic exposure to Respirable Elongated Mineral Particles may result in lung disease, and the risk of lung cancer is increased for smokers.

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.

5.3 Advice for firefighters

Non flammable, treat surrounding fires as per their requirements.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

If dust is or could be present, wear Personal Protective Equipment (PPE) as detailed in Section 8 of this SDS. Clear area of all unprotected personnel. Ventilate area where possible.

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 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
Use of safe work practices are recommended to avoid eye or skin contact and inhalation.

7.2 Conditions for safe storage, including any incompatibilities
All stockpiles and dumps should be managed to avoid dust generation, run-off or the risk of collapse.

7.3 Specific end uses
The use of quarry products in domestic applications is recommended for under slab or similar applications – avoid domestic applications where fine dusts may be generated.

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></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>QUARTZ (SILICA CRYSTALLINE)</td>
<td>SWA (AUS)</td>
<td>--</td>
<td>0.1</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 respirable Quartz (Crystalline Silica) and Elongated Mineral Particle levels below the recommended exposure standard.

PPE
Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

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

Hands
Where hands are subject to "dry skin" or "skin tears", wear PVC, rubber or cotton gloves.

Body
Wear long sleeved shirt and full-length trousers.

Respiratory
Where an inhalation risk exists wear a Class P2 (Particulate) disposable face piece or a respirator, dependent on a site specific risk assessment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- **Appearance**: SOLID (COLOUR, SHAPE AND TEXTURE DEPENDS ON SOURCE OF RAW MATERIAL)
- **Odour**: ODOURLESS
- **Flammability**: NON FLAMMABLE
- **Flash point**: NOT RELEVANT
- **Boiling point**: NOT AVAILABLE
- **Melting point**: NOT AVAILABLE
- **Evaporation rate**: NOT AVAILABLE
- **pH**: NOT AVAILABLE
- **Vapour density**: NOT AVAILABLE
- **Specific gravity**: NOT AVAILABLE
- **Solubility (water)**: INSOLUBLE
- **Vapour pressure**: NOT AVAILABLE
- **Upper explosion limit**: NOT RELEVANT
- **Lower explosion limit**: NOT RELEVANT
- **Partition coefficient**: NOT AVAILABLE
- **Autoignition temperature**: NOT AVAILABLE
9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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 EXPLOSIVE</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>NON OXIDISING</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1 Reactivity
This material is considered inert.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Polymerization will not occur.

10.4 Conditions to avoid
No known conditions to avoid.

10.5 Incompatible materials
Incompatible with strong acids (e.g. hydrofluoric acid).

10.6 Hazardous decomposition products
This material will not decompose to form hazardous products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

**Acute toxicity**
Acute silicosis occurs after a short exposure to very high levels of silica and the alveolar spaces fill with a lipid and proteinaceous exudate. This could occur in exposure in confined spaces where respiratory protection is not worn. The condition causes rapidly progressive dyspnoea and death, usually within months of onset. Workers with acute silicosis may be expected to have a largely restrictive functional abnormality with gas exchange abnormalities.

**Skin**
Contact may result in mechanical irritation, redness, rash and dermatitis.

**Eye**
Contact may result in mechanical irritation, lacrimation and redness.

**Sensitisation**
Not classified as causing skin or respiratory sensitisation.

**Mutagenicity**
Insufficient data available to classify as a mutagen.

**Carcinogenicity**
This product contains crystalline silica which is classified as carcinogenic to humans (IARC Group 1). However, there is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore, preventing the onset of silicosis will also reduce the cancer risk. There is also information that concludes the risk of lung disease in smokers is greatly increased when combined with dust exposures. The level of health risk posed by non-asbestiform respirable Elongated Mineral Particles continues to be debated internationally and there is no agreed position on the health risk posed, therefore a precautionary approach is considered appropriate.

**Reproductive**
Insufficient data available to classify as a reproductive toxin.

**STOT - single exposure**
Not classified as causing organ damage from single exposure.

**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. Exposure to silica at levels that appear not to cause overt silicosis can cause chronic bronchitis and chronic obstructive airways disease. An increased susceptibility to tuberculosis occurs in workers with established silicosis. Epidemiological studies have revealed an excess prevalence of autoimmune disease like scleroderma, rheumatoid arthritis and systemic lupus erythematosus. In the last 10 years several studies have linked crystalline silica with renal disease, particularly glomerulonephritis.

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

12. ECOLOGICAL INFORMATION
12.1 Toxicity
The main component/s of this product are not anticipated to cause any adverse effects to the environment.

12.2 Persistence and degradability
Product is persistent and non-degradable.

12.3 Bioaccumulative potential
This product is not expected to bioaccumulate.

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
Ensure product is kept damp, or covered with moist soil to prevent dust generation and dispose of to approved Council Landfill. 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>UN Number</th>
<th>LAND TRANSPORT (ADG)</th>
<th>SEA TRANSPORT (IMDG / IMO)</th>
<th>AIR TRANSPORT (IATA / ICAO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1</td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
<tr>
<td>14.2</td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
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<tr>
<td>14.3</td>
<td>None allocated.</td>
<td>None allocated.</td>
<td>None allocated.</td>
</tr>
<tr>
<td>14.4</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.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
Xn Harmful

Risk phrases
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Safety phrases
S22 Do not breathe dust.
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Inventory listings
AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.
Additional information

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.

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Web: www.rmt.com.au

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