1. IDENTIFICATION

GHS Product Identifier
RIGIPHALT®

Company Name
Fulton Hogan Industries Pty Ltd (ABN 54 000 630 689)

Address
25 Groves Avenue McGrath's Hill
NSW 2756 Australia

Telephone/Fax Number
Tel: (02)45875 111

Emergency phone number
1800 638 556 (24hr)

Recommended use of the chemical and restrictions on use
Heavy duty pavements / container terminal pavements

Other Names

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAVY DUTY PAVEMENT</td>
<td></td>
</tr>
</tbody>
</table>

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia
Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Carcinogenicity: Category 1
Eye Damage/Irritation: Category 1
Skin Corrosion/Irritation: Category 2
STOT Repeated Exposure: Category 1
STOT Single Exposure: Category 3 (respiratory tract irritation)

Signal Word (s)
DANGER

Hazard Statement (s)
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H350 May cause cancer by inhalation.
H372 Causes damage to organs through prolonged or repeated exposure by inhalation.
Precautionary statement – Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash contaminated skin thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER or doctor/physician.
P314 Get medical advice/attention if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.

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

Precautionary statement – Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition
Contains Chromium (VI) at <14ppm. May produce an allergic reaction.

Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland cement</td>
<td>65997-15-1</td>
<td>20-100 %</td>
</tr>
<tr>
<td>Crystalline Silica</td>
<td>14808-60-7</td>
<td>0-10 %</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>1305-78-8</td>
<td>0-3 %</td>
</tr>
<tr>
<td>Ingredients determined not to be hazardous.</td>
<td></td>
<td>Balance</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Inhalation
If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Encourage affected person to cough, spit out and blow their nose to remove dust. Seek medical attention.

Ingestion
Do not induce vomiting. Wash out mouth thoroughly with water. Seek immediate medical attention.

Skin
Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.
Eye contact
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Seek immediate medical attention.

First Aid Facilities
Eyewash, safety shower and normal washroom facilities.

Advice to Doctor
Treat symptomatically

Other Information
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases.

Specific Hazards Arising From The Chemical
This product is non combustible. However heating can cause expansion or decomposition leading to violent rupture of containers.

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid inhalation of dust, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:
Crystalline silica
TWA: 0.1 mg/m³
Calcium oxide
TWA: 2 mg/m³
Portland cement (Inspirable dust)
TWA: 10 mg/m³
Chromium VI compounds (as Cr)
TWA: 0.05 mg/m³
Note: Sen

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.
‘Sen’ Notice: The substance may cause sensitization by skin contact or by inhalation.

**Biological Limit Values**
No biological limits allocated.

**Appropriate Engineering Controls**
This substance is hazardous and should be used with a local exhaust ventilation system, drawing solid/dust away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of particulates below the exposure standards, suitable respiratory protection must be worn.

**Respiratory Protection**
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

**Eye Protection**
Safety glasses with full face shield should be used. Eye protection devices should conform to relevant regulations.
Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

**Hand Protection**
Wear gloves of impervious material such as PVC. Final choice of appropriate gloves will vary according to individual circumstances.
.i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.
The use of a barrier cream is recommended.

**Body Protection**
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Properties</th>
<th>Description</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Powder</td>
<td>Appearance</td>
<td>Fine powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Grey to off-white</td>
<td>Odour</td>
<td>No distinctive odour</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
<td>Melting Point</td>
<td>&gt;1200°C</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
<td>Solubility in Water</td>
<td>Slight, reacts on mixing with water forming an alkaline (caustic) solution (pH&gt;11)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.8-3.2</td>
<td>pH</td>
<td>&gt;11</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>Not available</td>
<td>Vapour Density (Air=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
<td>Odour Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
<td>Partition Coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
<td>Flammability</td>
<td>Non combustible</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable</td>
<td>Explosion Limit - Upper</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosion Limit - Lower</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Chemical Stability
Stable under normal conditions of storage and handling. Will react with water.

Reactivity and Stability
Reacts with incompatible materials.

Conditions to Avoid
Heat, flames and other sources of ignition.

Incompatible materials
Oxidising agents and strong acids. Contact with water should be avoided. Wet portland cement is alkaline. As such, it is incompatible with acids, ammonium salts and aluminium metal.

Hazardous Decomposition Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases.

Possibility of hazardous reactions
Exposure to high temperatures (e.g. fire) may cause product to decompose into Calcium Oxide and Carbon Dioxide. The material is a moderately strong base and will react with acids.

Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No toxicity data available for this material.

Ingestion
Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation
May cause respiratory irritation. Inhalation of product dust can cause irritation of the nose, throat and respiratory system. Chronic exposure to this material may aggravate existing respiratory disorders and lung disorders such as bronchitis, emphysema and asthma. Onset and progression are related to dust concentrations and duration of exposure. Repeated exposure to respirable crystalline silica dust may lead to silicosis, or other serious delayed lung injury. The onset of silicosis is usually slow and lung damage may occur even when no symptoms or signs of ill-health have occurred. Silicosis can develop to a more serious degree even after exposure has ceased, and may also lead to other diseases including heart disease and scleroderma.

Skin
Causes skin irritation. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis. Prolonged skin contact may also cause chemical burns. Allergic contact dermatitis may occur in some individuals due to the presence of trace amounts of hexavalent chromate. 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.

Eye
Causes eye damage. Eye contact will cause stinging, blurring, tearing, severe pain and possible burns, necrosis, permanent damage and blindness.

Respiratory sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ cell mutagenicity
Not considered to be a mutagenic hazard.

Carcinogenicity
May cause cancer by inhalation. Classified as a Known or presumed human carcinogen.

This product contains crystalline silica. Crystalline Silica (respirable size <= 7 µm) has been classified by the International Agency for Research on Cancer (IARC) as Carcinogenic to Humans (Group 1). Trace amounts of Chromium (VI) compounds are present.
Chromium (VI) compounds has been classified by the International Agency for Research on Cancer (IARC) as Carcinogenic to Humans (Group 1).

**Reproductive Toxicity**
Not considered to be toxic to reproduction.

**STOT-single exposure**
May cause respiratory irritation.

**STOT-repeated exposure**
Causes damage to organs through prolonged or repeated exposure by inhalation.

**Aspiration Hazard**
Not expected to be an aspiration hazard.

**Other Information**
Contains trace quantities of hexavalent chromium (VI) compounds. Chromium (VI) compounds may cause sensitisation in contact with skin.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Product may raise pH if it enters waterways.

**Persistence and degradability**
Not available

**Mobility**
Not available

**Bioaccumulative Potential**
Not available

**Other Adverse Effects**
Not available

**Environmental Protection**
Prevent this material entering waterways, drains and sewers.

### 13. DISPOSAL CONSIDERATIONS

**Disposal considerations**
The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.

### 14. TRANSPORT INFORMATION

**Transport Information**
Road and Rail Transport (ADG Code):

Marine Transport (IMO/IMDG):
Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):
Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**U.N. Number**
None Allocated

**UN proper shipping name**
None Allocated
Transport hazard class(es)
None Allocated

Special Precautions for User
Not available

IMDG Marine pollutant
No

Transport in Bulk
Not available

15. REGULATORY INFORMATION

Regulatory information
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
Not Scheduled

16. OTHER INFORMATION

Date of preparation or last revision of SDS
SDS reviewed: December 2016
Superseded: November 2011

References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of classification and labelling of chemicals.