1. IDENTIFICATION

GHS Product Identifier
JETBOND

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
Road construction and maintenance

Other Names

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON PICKUP TACKCOAT</td>
<td></td>
</tr>
<tr>
<td>ROADBOND</td>
<td></td>
</tr>
</tbody>
</table>

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Not 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 Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

3. COMPOSITION/INFORMATION ON INGREDIENTS
Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>-</td>
<td>&gt;60 %</td>
</tr>
<tr>
<td>Bitumen</td>
<td>Mixture</td>
<td>&gt;30 %</td>
</tr>
<tr>
<td>Kerosene</td>
<td>-</td>
<td>&lt;1 %</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>7647-01-0</td>
<td>&lt;0.5 %</td>
</tr>
<tr>
<td>Additives</td>
<td>-</td>
<td>&lt;0.5 %</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Inhalation
If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

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

Skin
Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities
Eyewash and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

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

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products
Non combustible material.

Specific Hazards Arising From The Chemical
This product is non combustible. However, following evaporation of aqueous component under fire conditions, the non-aqueous component may decompose and/or burn.

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
Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. 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 vapours and mists, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area, out of direct sunlight. 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:

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA</th>
<th>Peak limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bitumen - mixture</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>5 Peak</td>
<td>7.5 Peak</td>
</tr>
</tbody>
</table>

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.
Peak Limitation: A ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes.

Biological Limit Values
No biological limits allocated.

Appropriate Engineering Controls
Use with good general ventilation. If mists or vapours are produced, local exhaust ventilation should be used.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist 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 side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. 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.
**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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Form</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Light to dark brown.</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Decomposition Temperature</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Boiling Point</strong></td>
<td>100°C at 760mm Hg</td>
</tr>
<tr>
<td><strong>Solubility in Water</strong></td>
<td>Soluble, then precipitates bitumen.</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.02 at 15°C</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>3.5-5 (estimated)</td>
</tr>
<tr>
<td><strong>Vapour Pressure</strong></td>
<td>Negligible</td>
</tr>
<tr>
<td><strong>Vapour Density (Air=1)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Odour Threshold</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Viscosity</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Partition Coefficient: n-octanol/water</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>Non-combustible aqueous</td>
</tr>
<tr>
<td><strong>Auto-Ignition Temperature</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammable Limits - Lower</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammable Limits - Upper</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Reacts with incompatible materials.

Chemical Stability
Stable under normal conditions of storage and handling.

Conditions to Avoid
Extremes of temperature and direct sunlight.

Incompatible materials
Not available

Hazardous Decomposition Products
Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions
Will react with strong oxidizing agents.

Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information
No toxicity data available for this material. The available toxicity data for the ingredients are as follows:

Acute Toxicity - Oral
Toxicity data for Bitumen:
LD50 (Rat): >5000 mg/kg

Toxicity data for Kerosene:
LD50 (Rat): 15 gm/kg

Acute Toxicity - Inhalation
Toxicity data for Hydrochloric acid:
LC50 (Rat) : 45000 mg/m³/5M

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

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin
May be irritating to skin. The symptoms may include redness, itching and swelling.

Eye
May be irritating to eyes. The symptoms may include redness, itching and tearing.

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
Not considered to be a carcinogenic hazard.

Bitumen is listed as a Group 2B: Possibly carcinogenic to humans according to International Agency for Research on Cancer (IARC). Hydrochloric acid is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).
Reproductive Toxicity
Not considered to be toxic to reproduction.

STOT-single exposure
Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure
Not expected to cause toxicity to a specific target organ.

Aspiration Hazard
Not expected to be an aspiration hazard.

Chronic Effects
Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity
No ecological data are available for this material.

Persistence and degradability
Not available

Mobility
Soluble in water, then precipitates bitumen.

Bioaccumulative Potential
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
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

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

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number
None Allocated

UN proper shipping name
None Allocated

Transport hazard class(es)
None Allocated

IMDG Marine pollutant
No
15. REGULATORY INFORMATION

Regulatory information
Not 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
MSDS Reviewed: Januaury 2015
MSDS Supersedes: January 2010

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, Safe work Australia.
American Conference of Industrial Hygienists (ACGIH)
Globally Harmonised System of classification and labelling of chemicals.

END OF SDS

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