1. Identification of Substance & Company

<table>
<thead>
<tr>
<th>Product name</th>
<th>James Hardie Fibre Cement Products</th>
</tr>
</thead>
</table>

UN number: NA
Proper Shipping Name: NA
Packaging group: NA
Hazchem code: NA

Uses: The above products are used in internal lining, external cladding, internal/external flooring, decking and fencing applications as per the relevant installation guides.

Company Details

Company: James Hardie Australia Pty Limited
Address: 10 Colquhoun Street
          Rosehill
          NSW
          2142
          Australia
Telephone: 13 11 03

Emergency Telephone Number: 13 11 03

2. Hazard Identification

Hazard classification for Australia (GHS)

This product has been assessed according to GHS and is classified as follows:

<table>
<thead>
<tr>
<th>GHS category</th>
<th>Hazard Code</th>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity, Cat 1A</td>
<td>H350</td>
<td>* May cause cancer through inhalation of dust.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity, Cat 1</td>
<td>H372</td>
<td>* Causes damage to lungs and respiratory system through prolonged or repeated exposure by inhalation of dusts.</td>
</tr>
</tbody>
</table>

* This classification applies to any respirable crystalline silica dust potentially released from James Hardie Fibre Cement products, e.g. during cutting, drilling, grinding or rebating in the course of installation and handling of this product. The intact fibre cement products are not expected to result in any adverse toxic effects.

SYMBOLS

DANGER
Other Classifications
The dust and fibres of this substance may be irritating to the skin and respiratory tract as a result of physical (mechanical) reaction (i.e. scratch). The irritation is not a result of a chemical reaction.

Precautionary Statements
The following precautionary statements apply to handling and installation of this product and if respirable dust is created during processing/handling and installation. For details of personal protective equipment prefer to section 8.

Prevention
P201 Obtain special instruction before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust.
P264 Wash hands and face thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P281 Use personal protective equipment as required.

Response
P308+P313 IF exposed or concerned: get medical advice
P314 Get medical advice if you feel unwell.

Disposal
P501 Dispose of products in accordance with local/regional/national/international regulations.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS/Identification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline Silica (quartz)</td>
<td>14808-60-7</td>
<td>20-60%</td>
</tr>
<tr>
<td>Calcium Silicate (hydrate)</td>
<td>65997-15-1</td>
<td>35-65%</td>
</tr>
<tr>
<td>Calcium Carbonate</td>
<td>471-34-1</td>
<td>&lt;30%</td>
</tr>
<tr>
<td>Calcium Aluminium Silicate (hydrate)</td>
<td>NA</td>
<td>&lt;20%</td>
</tr>
<tr>
<td>Cellulose</td>
<td>9004-34-6</td>
<td>&lt;15%</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

The exact ratio of components will vary between specific products. Trace quantities of impurities are also likely.

4. First Aid

General Information
If medical advice is needed, have product label at hand. You should call the Poisons Information Centre if you feel that you may have been harmed or irritated by this product. The number is 13 11 26 (24 hr, 7 days a week emergency service). If shortness of breath or other health concerns develop after exposure to dust from the product, seek medical attention.

Recommended first aid facilities
Ready access to running water is recommended.

Exposure
Swallowed
IF SWALLOWED: Give a glass of water to drink. Do NOT induce vomiting. If any symptoms occur, contact a doctor.

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation occurs: Get medical advice.

Skin contact
IF ON SKIN: Wash with plenty of soap and water. Get medical advice if irritation occurs or persists.

Inhaled
IF INHALED: Dusts may cause irritation. If experiencing irritation, remove to fresh air. Drink water to clear throat. If shortness of breath or wheezing develops, seek medical attention. Call a POISON CENTER or doctor/physician if you feel unwell.

Advice to Doctor
Treat symptomatically
5. Firefighting Measures

**Fire and explosion hazards:** There are no specific risks for fire/explosion for this product. It is non-flammable.

**Suitable extinguishing substances:** Not applicable.

**Unsuitable extinguishing substances:** Not applicable.

**Products of combustion:** Fibre Cement boards are non-flammable.

**Protective equipment:** No special measures are required.

**Hazchem code:** 1T (recommended, no signage required)

6. Accidental Release Measures

Fibre cement products in their intact state do not present a fire, health or environmental hazard. The following precautions apply to spills and releases of dust generated during cutting, rebating, drilling, routing, sawing or abrading fibre cement.

**Emergency procedures**

This product is not considered flammable or ecotoxic.

If a significant spill occurs:
- Wear protective equipment to prevent skin, eye and respiratory exposure to dusts.
- Clear area of any unprotected personnel.
- Avoid creating dust. If appropriate, use a gentle water spray to wet material to minimise dust generation.

**Clean-up method**

If possible to wet the dust, wet and sweep up the solid. Dry sweeping should not be attempted. Vaccuming with an industrial vacuum outfitted with a high efficiency particulate filter is recommended. Do not wash material down stormwater drains.

**Disposal**

Collect recoverable material into labelled containers for recycling or salvage. This material may be suitable for approved landfill. Dispose of only in accord with all regulations. See section 14.

**Precautions**

Wear protective equipment to prevent eye contamination and the inhalation of dusts. Work up wind or increase ventilation.

7. Storage & Handling

**Storage**

Avoid storage near food and beverages.

Avoid contact with incompatible substances as listed in Section 10.

Store all James Hardie building products in a dry location. Avoid mechanical damage to the product, such as chipping of the edges and corners of the sheets. The product must be laid flat under cover on a smooth surface clear of the ground to avoid exposure to water or moisture.

**Handling**

Keep exposure to crystalline silica dust to a minimum, and minimise the quantities of dust in work areas.

During installation and handling of this product: Wherever possible, practices likely to generate dust should be carried out in well-ventilated areas (e.g. outdoors).

Minimise dust creation by using the recommended tooling and cutting methods. (refer the technical data sheet and James Hardie Best Practice Guide for tips on the safe handling of these products).

Work area should be cleaned regularly by wet sweeping or vacuuming.

Keep away from incompatible substances (section 10).

8. Exposure Controls / Personal Protective Equipment

**Exposure Standards**

An Exposure Standard (ES) for the mixture has not been established. Below are the exposure standards for the ingredients that are listed in the NOHSC: 1003.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>ES-TWA</th>
<th>ES-STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>nuisance dust</td>
<td>10mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>quartz (SiO₂):</td>
<td>0.1mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>quartz (respirable dust)</td>
<td>0.1mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>cristobalite (respirable dust)</td>
<td>10mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>cellulose (paper fibre)</td>
<td>3mg/m³</td>
<td>Not available</td>
</tr>
<tr>
<td>carbon black</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Engineering Controls
In workplace situations, concentration values below the ES value must be maintained. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne concentrations of dusts are high, you are advised to modify processes or increase ventilation.

Personal protection when handling products that may generate silica dust: 1) Refer to current James Hardie instruction and best practice guidelines to reduce or limit the release of dust. 2) Warn others in the area to avoid the dust. 3) When using mechanical saw or high speed cutting tools, work out doors and use dust collection equipment. 4) If no other dust controls are available, wear an approved dust mask or respirator (see below).

During clean-up, use a well-maintained vacuum and filter appropriate for capturing fine respirable dust or use wet clean-up methods, never dry sweep.

Specific Handling instructions

Cutting Outdoors
Position cutting station so that wind will blow dust away from user or others in working area and allow for ample dust dissipation.
Use one of the following methods based on the required cutting rate and job-site conditions:
- **BEST** • Score and snap using carbide-tipped scoring knife or utility knife • Fibre-cement shears (electric or pneumatic)
- **BETTER** • Dust reducing circular saw equipped with Hardieblade™ saw blade and M-class vacuum extraction
- **GOOD** (for low to moderate cutting only) • Dust reducing circular saw with Hardieblade™ saw blade

Cutting Indoors
Cut only using score and snap method or with fibre-cement shears (manual, electric or pneumatic)
Position cutting station in well-ventilated area to allow for dust dissipation.

Sanding / Rebating / Drilling / Other Machining
If sanding, rebating, drilling or other machining is necessary, you should always wear an approved dust mask or respirator and warn others in the immediate area.
During clean-up of dust and debris, NEVER dry sweep as it may excite silica dust particles into the user’s breathing area. Instead, wet debris down with a fine mist to suppress dust during sweeping, or use a M-class vacuum to collect particles.

Important Notes
For maximum protection (lowest respirable dust production), James Hardie recommends always using “Best”-level cutting methods where feasible.
NEVER use a power saw indoors.
NEVER use a circular saw blade that does not carry the Hardieblade™ saw blade trademark, or is of equal or better performance at reducing risk of dust exposure.
NEVER dry sweep – use wet suppression methods or HEPA vacuum.
NEVER use a grinder or continuous rim diamond blade for cutting.
ALWAYS follow tool manufacturer’s safety recommendations.

Personal Protective Equipment

Eyes
Avoid contact with eyes. Use safety glasses or goggles if irritant levels of dusts are present.

Skin
Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves if concerned about irritation or dryness of the skin.

Respiratory
Use Australian/New Zealand Standard 1715:2009 Selection, Use and Maintenance of Respiratory Protective Equipment for more extensive guidance and more options on selecting respirators for the workplace. Select respirators based on the level of exposure to crystalline silica as measured by dust sampling. Use respirators that offer protection to the highest concentrations of crystalline silica if the actual concentrations are unknown.
Put in place a respiratory protection and monitoring program that complies with Safe work Australia Guide for Health Monitoring for exposure to hazardous chemicals.

WES Additional Information
No additional information

9. Physical & Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid usually grey sheets or planks with various dimensions according to the product profiles.</td>
</tr>
<tr>
<td>Odour</td>
<td>no odour</td>
</tr>
<tr>
<td>pH</td>
<td>no pH data</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>no data</td>
</tr>
<tr>
<td>Boiling point</td>
<td>no data</td>
</tr>
<tr>
<td>Volatile materials</td>
<td>not applicable</td>
</tr>
<tr>
<td>Freezing / melting point</td>
<td>no data</td>
</tr>
</tbody>
</table>

Product name: James Hardie Fibre Cement Products
10. Stability & Reactivity

**Stability**
Product is non-reactive and stable.

**Conditions to be avoided**
Avoid the creation of dust during processing, handling and installation.

**Substance Specific Incompatibility**
Hydrofluoric acid will dissolve silica and can generate silicon tetrafluoride, a corrosive gas. Contact with strong oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride or oxygen difluoride may cause fires and/or explosions. Furthermore, limestone is incompatible with acids and ammonium salts.

**Hazardous decomposition products**
May react with hydrofluoric acid to form toxic silicon tetra-fluoride gas.

**Hazardous reactions**
None known

11. Toxicological Information

**Summary**
Fibre cement is non-toxic in its intact form. The following applies to respirable dust that may be generated during cutting, rebating, drilling, routing, sawing, crushing or otherwise abrading fibre cement.

IF SWALLOWED: No adverse effects expected.
IF IN EYES: Dust may be irritating to eyes (mechanical irritation).
IF ON SKIN: This product is not absorbed through the skin. Dust may dry out the skin.

**Supporting Data**

| **Acute** | **Oral** | No evidence of oral toxicity. |
| **Dermal** | No evidence of dermal toxicity. |
| **Inhaled** | The substance is not considered acutely toxic if inhaled, however there may be irritation of the respiratory tract if dust is inhaled. |
| **Eye** | The dust may cause eye irritation (mechanical). |
| **Skin** | The mixture is not considered to be a skin irritant. |
| **Chronic** | **Sensitisation** | No evidence of skin sensitisation or respiratory sensitisation. |
| **Mutagenicity** | No ingredient present at concentrations > 0.1% is considered a mutagen. |
| **Carcinogenicity** | This product contains crystalline silica. Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC Group 1). The carcinogenicity of silica is related to long term (e.g., 10 years) inhalation of very fine particulate (e.g., from sand blasting or dry cutting of concrete). Carcinogenicity of silica appears linked to development of silicosis (see systematic below) followed by complications and, eventually lung cancer. |
| **Reproductive / Developmental** | No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. |
| **Systemic** | There may be some irritation of the respiratory tract. |
| **Aggravation of existing conditions** | Medical conditions which may be aggravated: pre-existing upper respiratory and lung disease such as, but not limited to bronchitis, emphysema and asthma. Some studies suggest that cigarette smoking increases the risk of silicosis, bronchitis and lung cancer in persons also exposed to crystalline silica. |
12. Ecological Data

Summary
These products are not considered ecotoxic.

Supporting Data
Aquatic
These products are not considered to be toxic in the aqueous environment.

Bioaccumulation
No data.

Degradability
No data.

Soil
These products are not considered to be toxic in the soil environment.

Biocidal
Not designed as a biocide.

13. Disposal Considerations

Restrictions
There are no product-specific restrictions. However, state and local disposal regulations may apply. Note that state and local disposal regulations may differ from federal disposal regulations.

Disposal method
Disposal of this product must comply with the requirements of state and local disposal regulations. If there are no applicable regulations, dispose of in a secure landfill, or in a way that will not expose others to dust.

Contaminated packaging
Not applicable.

14. Transport Information

There are no specific restrictions for this product (not a dangerous good).

UN number: NA

Proper shipping name: NA

Class(es): NA

Packing group: NA

Precautions: Not applicable.

Hazchem code: NA

15. Regulatory Information

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)
Not scheduled

Applicable prohibitions and notifications/licensing requirements
Not listed

Agricultural and Veterinary Chemicals Act
Not listed

Listing in the Australian Inventory of Chemical Substances (AICS)
Quartz
High Volume Industrial Chemicals List (HVICL) Hazardous Substance
Cristobalite
International Programme on Chemical Safety (IPCS) – CICAD
Calcium silicate hydrate
High Volume Industrial Chemicals List (HVICL) Hazardous Substance
Calcium carbonate
High Volume Industrial Chemicals List (HVICL) listed
Cellulose
High Volume Industrial Chemicals List (HVICL)
Carbon black
Hazardous substance

Additional information
Not applicable

GHS Hazardous Chemical Information List
Not listed
16. Other Information

### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICS</td>
<td>Australian Inventory of Chemical Substances</td>
</tr>
<tr>
<td>CAS Number</td>
<td>Unique Chemical Abstracts Service Registry Number</td>
</tr>
<tr>
<td>EC50</td>
<td>Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)</td>
</tr>
<tr>
<td>ES</td>
<td>Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.</td>
</tr>
<tr>
<td>GESTIS</td>
<td>Database on Hazardous substances, Information system on hazardous substances of the German Social Accident Insurance.</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonised System of Classification and Labelling of Chemicals</td>
</tr>
<tr>
<td>HAZCHEM Code</td>
<td>Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>LEL</td>
<td>Lower Explosive Limit</td>
</tr>
<tr>
<td>LD50</td>
<td>Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)</td>
</tr>
<tr>
<td>NICNAS</td>
<td>National Industrial Chemicals Notification and Assessment Scheme</td>
</tr>
<tr>
<td>NZ EPA CCID</td>
<td>New Zealand Environmental Protection Agency. Chemical Classification Information Database.</td>
</tr>
<tr>
<td>Peak Limitation</td>
<td>Peak Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.</td>
</tr>
<tr>
<td>SDS</td>
<td>Safety Data Sheet</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded</td>
</tr>
<tr>
<td>STOT</td>
<td>Specific Target Organ Toxicity</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average – generally referred to ES averaged over typical work day (usually 8 hours)</td>
</tr>
<tr>
<td>UEL</td>
<td>Upper Explosive Limit</td>
</tr>
<tr>
<td>UN Number</td>
<td>United Nations Number</td>
</tr>
</tbody>
</table>

### References

Data Unless otherwise stated comes from Hazardous Substances Information System (HSIS) for the specific chemical.


### Other References:

Suppliers SDS

### Review

Date August 2016

Reason for review Not applicable – new SDS

### Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The GHS classifications for this SDS have been allocated based on general information from the supplier (e.g., hazard, toxicological). This SDS is prepared in accordance with the Code of Practice for “Preparation of Safety Sheets for hazardous Chemicals” December 2011 in accordance with WHS regulations.

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