



**1. Identification of Substance & Company**

**Product**

<b>Product name</b>	HardieGlaze™, Horizon™ Lining
<b>Other names</b>	HardieGlaze, Horizon Lining
<b>HSNO approval</b>	Not applicable – HardieGlaze sheets are a manufactured Article. The product is exempt under HSNO. The substance, if released, is approved under HSNO as Construction Products (Toxic [6.7A]) Group Standard 2006, HSR002545. HardieGlaze Sheets contain crystalline silica.
<b>Approval description</b>	Manufactured Article
<b>UN number</b>	NA
<b>Proper Shipping Name</b>	NA
<b>Packaging group</b>	NA
<b>Hazchem code</b>	NA
<b>Uses</b>	HardieGlaze and Horizon Lining products are used as internal wet or dry area wall or ceiling linings.

**Precautions:** HardieGlaze and Horizon Lining Sheet products listed are not classified as hazardous substances under HSNO. However these products contain crystalline silica, which may be released on cutting, grinding or drilling. For safe use of this product refer the Technical Data Sheet provided by James Hardie, which detail recommended Safe Working Practices.

**Note:** This Safety Data Sheet applied only to products manufactured after 1985. Products carrying these names and manufactured before 1985 may contain asbestos. Safety information on pre 1985 products may be obtained in New Zealand by contacting James Hardie New Zealand Ltd at 0800 808 868

**Company Details**

<b>Company</b>	<b>James Hardie New Zealand Limited</b>	
<b>Address</b>	50 O'Rorke Road, Penrose, Auckland New Zealand	PO Box 12-070, Penrose Auckland New Zealand
<b>Telephone</b>	0800 808 868 (Internal Sales Helpline)	

**Emergency Telephone Number: 0800 764 766 (24 Hours)**

**2. Hazard Identification**

**Hazard Classifications**

This is a manufactured Article. The products is exempt under HSNO. The substance, if released, is considered to be approved under HSNO as Construction Products (Toxic [6.7A]) Group Standard 2006, HSR002545 and is classified as follows:

- Classes:
- 6.4A eye irritant
  - 6.7A known carcinogen
  - 6.9A known human target organ toxicant

**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 and therefore does not trigger these classifications under HSNO.

Health issues that may arise from exposure to this product relate to either dusts that have been generated from grinding or sanding operations, or from breakdown product as a result of burning of the product (e.g. in a fire, or cutting and welding).

**Hazard and Precautionary Statements**

**Hazard** Causes eye irritation.  
May cause cancer.  
Causes damage to organs through prolonged or repeated exposure.

**Precautionary** Read label before use.  
Wash hands thoroughly after handling.  
Wear eye/face/respiratory protection.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe dust.  
Do not eat, drink or smoke when using this product.

Further precautionary statements can be found in Section 4 – First Aid.

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**3. Composition / Information on Ingredients**

Component:	CAS/ Identification	Class for ingredient(s)	Conc (%)
Polyurethane coating	proprietary	non hazardous	>80%
Titanium Dioxide	13463-67-7	6.4A, 6.7B (IARC 2B)	>10%
Calcium Carbonate	1317-65-3	6.3A, 6.4A	>5%
Magnesium Silicate	1343-88-0	6.3B, 6.4A, 6.9A	<5%
May contain: Crystalline Silica (Quartz)	14808-60-7	6.7A, 6.9A	>0.1%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

Note: The lining is considered inert. It is free of any solvent or other volatile materials (monomers, isocyanates). The inert cured film is a long chain polymer. It does not contain lead or other heavy metals.

**4. First Aid**

**General Information**

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by the dust of this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

If medical advice is needed, have this SDS, product container or label at hand.

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

**Exposure**

**Swallowed** Due to the nature of the product, this route of exposure is not expected under normal condition. Give a glass of water to drink. If a substantial quantity (e.g dust) has been chewed or swallowed, call the Poison Centre.

**Eye contact** For dust: 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 persists: Get medical advice.

**Skin contact** For dust: IF ON SKIN: Wash with plenty of soap and water.  
**Inhaled** IF INHALED: Dusts may cause irritation but are not likely to be harmful by inhalation. However, call a POISON CENTER or doctor/physician if you feel unwell.

**Advice to Doctor**

Treat symptomatically



## 5. Firefighting Measures

<b>Fire and explosion hazards:</b>	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
<b>Suitable extinguishing substances:</b>	Carbon dioxide, extinguishing powder, foam, fog sprays, water jets.
<b>Unsuitable extinguishing substances:</b>	Unknown.
<b>Products of combustion:</b>	HardieGlaze sheets are non-flammable. Combustion of the polyurethane lining may form toxic gases e.g. carbon monoxide, carbon dioxide, aromatic hydrocarbons, oxides of nitrogen, hydrogen cyanide. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	No special measures are required.
<b>Hazchem code:</b>	1T (recommended, no signage required)

## 6. Accidental Release Measures

<b>Containment</b>	There is no current legal requirement for secondary containment of this product. Prevent dust formed from the product from entering environment as it may clog drains and cause excess sediment in waterways.
<b>Emergency procedures</b>	If a significant spill occurs: If there is any loose material, cover with packaging material, e.g. plastic and reseal. Recycle or transfer to container for disposal. Dispose of according to guidelines below (Section 13).
<b>Clean-up method</b>	This product is not considered flammable or ecotoxic. Small spills do not require any special clean up method. Larger spills should be collected. Avoid dust formation, do not dry sweep. Use a HEPA vacuum or wet clean up methods.
<b>Disposal</b>	Collect recoverable material into labelled containers for recycling or salvage. Recycle packaging wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
<b>Precautions</b>	Use gloves and eye protection. See Section 8.

## 7. Storage & Handling

<b>Storage</b>	Keep from extreme heat, open flames and direct sunlight. 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.
<b>Handling</b>	During installation and handling of this product: Work in outdoor areas with ample ventilation. Minimise dust creation by using the recommended tooling and cutting methods. (refer the technical data sheet for tips on the safe handling of this product). See section 8 with regard to personal protective equipment requirements. Work area should be cleaned regularly by wet sweeping or vacuuming.



## 8. Exposure Controls / Personal Protective Equipment

### Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Department of Labour for this product. There is a general limit of 910mg/m<sup>3</sup> for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (OSH 2011)	Ingredient	WES-TWA	WES-STEL
	Calcium Silicate	10mg/m <sup>3</sup> (as inspirable dust)	No data
	Crystalline Silica (Quartz)	0.2 mg/m <sup>3</sup> (as respirable dust)	No data
	Cellulose (paper fibre)	10mg/m <sup>3</sup> (as inspirable dust)	No data
	Titanium dioxide	10mg/m <sup>3</sup>	No data
	Calcium carbonate	10mg/m <sup>3</sup>	No data

### Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of dusts are high, you are advised to modify processes or increase ventilation.

Follow the Health and Safety Guidelines for the Selection and Safe Handling of Synthetic Mineral Fibres, published by the Department of Labour.

Minimise dust formation by sanding or grinding small amounts at a time. Use a sander with a vacuum attachment if possible. Brush or sweep up dust and do not allow it to accumulate. If possible use an extractor fan.

When cutting or welding near the lining: remove as much of the paint as possible by mechanical means to minimise the amount that is burnt off. Increase ventilation or work outdoors (if possible).

### Personal Protective Equipment

#### Eyes



If cutting product with power tools, avoid contact with eyes. Use safety glasses or dust resistant safetygoggles if irritant levels of fibres and dusts are present.

#### Skin



Protective gloves and clothing should be worn when working with this product. Avoid direct contact with the dust or debris of this product. Work clothes should be laundered separately.

#### Respiratory



To prevent irritation a well fitted dust mask should be used (this is not recommended when exposure is close to the WES). A fine particulate half or full face respirator with an effective seal is recommended when airborne concentrations approach the WES (section 8). If sanding, grinding, crushing or cutting this product, it is possible that the silica dust WES (0.2 mg/m<sup>3</sup>) will be exceeded, hence a respirator will be required. If exposure to dust is likely, a full face respirator with a particulate filter is recommended.

When cutting and welding, it is possible that some toxic fumes may be emitted, therefore it is essential to wear a respirator with an organic vapour cartridge and particulate filter. Consider using a hand held welding mask instead of a fitted welding mask.

### WES Additional Information

Not applicable.

## 9. Physical & Chemical Properties

#### Appearance

Solid grey boards with various dimensions according to the product profiles. HardieGlaze™ Lining is glazed in white. Horizon™ Lining is glazed in different colours.

#### Odour

no odour

#### pH

no pH data

#### Vapour pressure

not applicable

#### Boiling point

no data

#### Volatile materials

no data

#### Solubility

not applicable

#### Specific gravity / density

no data

#### Flash point

not flammable

#### Danger of explosion

no data



Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

**10. Stability & Reactivity**

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Packaging should be kept in tact in order to avoid contamination. Keep from extreme heat, open flames and direct sunlight.
<b>Incompatible groups</b>	None
<b>Substance Specific Incompatibility</b>	None known
<b>Hazardous decomposition products</b>	Products of combustion of polyurethane lining: carbon monoxide, carbon dioxide, aromatic hydrocarbons, oxides of nitrogen, hydrogen cyanide.
<b>Hazardous reactions</b>	none known

**11. Toxicological Information**

**Summary**

No specific data is available for this product. Where available, toxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below.

**Supporting Data**

<b>Acute</b>	<b>Oral</b>	Unlikely that any effects will occur, due to the physical form of the product. Swallowing of the dust of this product may result in abdominal discomfort. The estimated LD <sub>50</sub> (oral, rat) for the mixture is > 5,000 mg/kg. Ingestion of this product may cause gastrointestinal irritation. Calcium Silicate: 3400mg/kg (rat).
	<b>Dermal</b>	The estimated LD <sub>50</sub> (dermal, rat) for the mixture is > 5,000 mg/kg.
	<b>Inhaled</b>	The substance is not considered acutely toxic if inhaled, however there may be irritation of the respiratory tract if dust is inhaled. Short term (acute) silicosis (see "systemic" below) can also occur with one-off exposures to very high levels of fine crystalline silica dust. Other short term effects include irritation, choking and difficulty breathing.
	<b>Eye</b>	Contact with fibre cement dust can result in irritation of the eye causing watering and redness. Calcium Silicate is slightly irritating to the eye.
<b>Chronic</b>	<b>Skin</b>	The dust from this product can cause acute symptoms such as irritation and itching of the skin. Skin reactions are generally transient and superficial. The dust is not absorbed through the skin.
	<b>Sensitisation</b>	No evidence of skin sensitisation or respiratory sensitisation.
	<b>Mutagenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Carcinogenicity</b>	The dust resulting from this product does contain 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. This product also contains Titanium dioxide, which is an IARC Group 2B carcinogen (possibly carcinogenic to humans).
<b>Reproductive / Developmental Systemic</b>		No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
		The dust of this product is considered to be a target organ toxicant, because of the presence of crystalline silica at greater than 1%. Crystalline silica triggers 6.9A classification if it is in the form of a fine respirable dust in an occupational (chronic exposure) setting. This is due to the development of acute silicosis which can occur following exposure to extremely high levels of fine silica dust. Silicosis is a type of pneumoconiosis – a disease of the lung that causes inflammation, scar tissue, lesions and fibrosis in the lung (alveolar). Symptoms include shortness of breath, cough, fever, loss of appetite and cyanosis (bluish skin). Silicosis can occur following prolonged exposure (e.g., 10 years) to relatively high levels of fine crystalline silica dust. Based on limited animal research, it is possible that repeated inhalation of cellulose fibre dust may lead to inflammation and scarring of the lung.
	<b>Aggravation of existing conditions</b>	Persons with impaired respiratory functions and respiratory disease may be adversely affected if exposed to excessive concentrations of dust created from working with this product. Smokers have an increased risk of lung cancer and silicosis.



## 12. Ecological Data

### Summary

No specific data is available for this product. Where available, ecotoxicological data has been researched and data for the mixture calculated. The results of these calculations are presented below.

### Supporting Data

<b>Aquatic</b>	The mixture is not considered to be toxic in the aqueous environment.
<b>Bioaccumulation</b>	HardieGlaze is not considered biopersistent.
<b>Degradability</b>	No data
<b>Soil</b>	The mixture is not considered to be toxic in the soil environment.
<b>Terrestrial vertebrate</b>	This product is not considered harmful to terrestrial vertebrates. No LC <sub>50</sub> (diet) data for ingredients are available and the classification is based on the LD <sub>50</sub> (oral) – see section 11 – oral toxicity.
<b>Terrestrial invertebrate</b>	The mixture is not considered harmful to terrestrial invertebrates.
<b>Biocidal</b>	Not designed as a biocide.

## 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply.
<b>Disposal method</b>	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. Place in sealable plastic bags and label as construction waste.
<b>Contaminated packaging</b>	Preferably re-cycle packaging, otherwise send to landfill or similar.

## 14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). There are no specific restrictions for this product (not a dangerous good).

<b>UN number:</b>	NA	<b>Proper shipping name:</b>	NA
<b>Class(es)</b>	NA	<b>Packing group:</b>	NA
<b>Precautions:</b>	NA	<b>Hazchem code:</b>	NA

## 15. Regulatory Information

This is a manufactured Article. The products is exempt under HSNO.

The substance, if released, is considered to be approved under HSNO as Construction Products (Toxic [6.7A]) Group Standard 2006, HSR002545, hence the following controls apply if the substance are released and/or during manufacturing processes.

### Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix) for released substance

Key workplace requirements are:

MSDS	Required if storing any quantity
Emergency plan	Required if storing >1000kg (dust)
Approved handler*	Not required. Exemptions from Approved Handler and other requirements relating to 6.7A only if being used in the construction industry.
Tracking	Not required
Bunding and secondary containment	Required if storing >1000kg (dust)
Signage	Not required
Location test certificate	Not required
Flammable zone	Not required
Fire extinguisher	Not required

\* **NOTE:** Exemptions from Approved Handler and other requirements relating to 6.7A apply only if substance is used in the construction industry.

### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.



**16. Other Information**

**Abbreviations**

<b>Approval Code</b>	Dust released from the product: Approval HSR002545, Construction Products (Toxic 6.7) Group Standard 2006 Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>Ceiling</b>	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
<b>Controls Matrix</b>	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (formerly known as ERMA)
<b>ERMA</b>	Environmental Risk Management Authority (now known as EPA)
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>MSDS/SDS</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>OSH</b>	The Occupational Safety and Health Service of the Department of Labour (NZ)
<b>STEL</b>	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
<b>TWA</b>	Time Weighted Average – generally referred to as WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.

**References**

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) <a href="http://www.epa.govt.nz/hs/compliance/chemicals.html">http://www.epa.govt.nz/hs/compliance/chemicals.html</a> , for specific chemicals.
<b>EPA Transfer Gazettes</b>	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
<b>Controls Matrix</b>	Part of the EPA New Zealand User Guide to the HSNO Control Regulations
<b>WES 2011</b>	The NZ Workplace Exposure Standards Effective from 2011, published by OSH and available on their web site – <a href="http://www.osh.dol.govt.nz">www.osh.dol.govt.nz</a> .

**Review**

<b>Date</b>	<b>Reason</b>
May 2012	NZ – new MSDS - draft
June 2012	Finalised MSDS

**Disclaimer**

This MSDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The MSDS 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 MSDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. This MSDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the MSDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: **+64 9 940 30 80**.

