



1. Identification of Substance & Company

Product

Product name	James Hardie Fibre Cement Sheet Products
Other names	James Hardie Weatherboards, Scyon® Linea® Weatherboard, Scyon® Axent™ Trim and Fascia, Scyon® Axon® Panel, Titan® Façade Panel, ExoTec® Façade Panel, CLD® Structural Cavity Batten, RAB® Board, Shingleside® Panel, HardieFlex® Sheet, Hardiebacker® Substrate, Monotek® Sheet, Hardiesoffit® Lining, Silkline® Soffit Lining, Eclipsa® Eaves Lining, Villaboard® Lining, HardieGlaze™ Lining, HardieGroove™ Lining, HardiePanel™ Compressed Sheet, Tile and Slate Underlay, HomeRAB® PreClad™ Lining, Rawform® Lining, Horizon™ Lining, Scyon® Secura® Interior/Exterior Flooring, Scyon® Stria® Cladding.
HSNO approval	Not applicable – Fibre Cement Sheet is 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. Fibre Cement Sheet Products contain crystalline silica.
Approval description	Manufactured Article
UN number	NA
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	NA
Uses	Fibre Cement Sheet products are used as internal/external wall and ceiling cladding, flooring, roofing or fencing.
Precautions:	Fibre Cement 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.

Company Details

Company	James Hardie New Zealand Limited	
Address	50 O'Rorke Road, Penrose, Auckland New Zealand	PO Box 12-070, Penrose Auckland New Zealand
Telephone	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.

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.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (%)
Calcium Silicate (Hydrate)	1344-95-2	6.1E (oral), 6.4A	10-60%
Crystalline Silica (Quartz)	14808-60-7	6.7A, 6.9A	10-30%
Cellulose	9004-34-6	6.9B	<10%
Non hazardous ingredients (pigments, fillers and surface coatings)	Proprietary	Non hazardous	<10%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.
Note: this does NOT contain Asbestos Fibres, if manufactured after 1985.

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 has been chewed or swallowed, call the Poison Centre.
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 persists: Get medical advice.
Skin contact	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

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam, fog sprays, water jets.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Fibre Cement boards are non-flammable. The packaging may decompose in a fire resulting in carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
Protective equipment:	No special measures are required.
Hazchem code:	1T (recommended, no signage required)

6. Accidental Release Measures

Containment	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.
Emergency procedures	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).
Clean-up method	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.
Disposal	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.
Precautions	Use gloves and eye protection. See Section 8.

7. Storage & Handling

Storage	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.
Handling	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 10mg/m³ for dusts and mists when limits have not otherwise been established.

NZ Workplace Exposure Stds (OSH 2010)	Ingredient	WES-TWA	WES-STEL
	Calcium Silicate	10mg/m ³ (as inspirable dust)	No data
	Crystalline Silica (Quartz)	0.2 mg/m ³ (as respirable dust)	No data
	Cellulose (paper fibre)	10mg/m ³ (as inspirable dust)	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.

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/m³) 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.

WES Additional Information

Not applicable.

9. Physical & Chemical Properties

Appearance

Solid grey boards with various dimensions according to the product profiles. James Hardie Weatherboards, Scyon® Linea® Weatherboards, Scyon® Axon® Panel, Titan® Façade Panel, Scyon® Axent™ Trim and Fascia and Scyon® Stria® Cladding are preprimed with Manilla white, Silcline® Soffit Eclipsa® Eaves Lining are prefinished off white, Monotek® sheets are tinted pink, HardieGlaze™ Lining is glazed in white, Horizon™ Lining is glazed in 8 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

Stability	Stable
Conditions to be avoided	Packaging should be kept in tact in order to avoid contamination. Keep from extreme heat, open flames and direct sunlight.
Incompatible groups	None
Substance Specific Incompatibility	None known
Hazardous decomposition products	none known
Hazardous reactions	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

Acute	Oral	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 ₅₀ (oral, rat) for the mixture is > 5,000 mg/kg. Ingestion of this product may cause gastrointestinal irritation. Calcium Silicate: 3400mg/kg (rat).
	Dermal	The estimated LD ₅₀ (dermal, rat) for the mixture is > 5,000 mg/kg.
	Inhaled	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.
	Eye	Contact with fibre cement dust can result in irritation of the eye causing watering and redness. Calcium Silicate is slightly irritating to the eye.
	Skin	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.
Chronic	Sensitisation	No evidence of skin sensitisation or respiratory sensitisation.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	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
	Reproductive / Developmental Systemic	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.
	Aggravation of existing conditions	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

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

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply.
Disposal method	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.
Contaminated packaging	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).

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

Approval Code	Dust released from the product: Approval HSR002545, Construction Products (Toxic 6.7) Group Standard 2006 Controls, ERMA. www.ermanz.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
ERMA	Environmental Risk Management Authority
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS/SDS	Material Safety Data Sheet (or Safety Data Sheet)
OSH	The Occupational Safety and Health Service of the Department of Labour (NZ)
STEL	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
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day.

References

Data	Unless otherwise stated comes from the ERMA HSNO chemical classification information database (CCID) http://www.ermanz.govt.nz/hs/compliance/chemicals.html , for specific chemicals.
ERMA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
Controls Matrix	Part of the ERMA New Zealand User Guide to the HSNO Control Regulations
WES 2010	The NZ Workplace Exposure Standards Effective from 2010, published by OSH and available on their web site – www.osh.dol.govt.nz .

Review

Date	Reason for review
April 2011	NA – new MSDS
July 2012	Changes in product names and to “Note” on page 1.

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, ERMA 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 or phone: +64 9 940 30 80.

