

NON-Hazardous, NON-Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **Concrete Roof Tiles and Roof Tile Accessories**

Recommended use: Roofing.

Supplier: CSR Building Products Ltd
ABN: 55 008 631 356
Street Address: Triniti 3, 39 Delhi Road
North Ryde NSW 2113
Australia
Telephone: +61 2 9235 8000 (or 1800 807 668 within Australia)

Emergency Telephone number: **1300 369 448 (Bus Hrs, Mon-Fri, 8am-5pm, AEST)**

2. HAZARDS IDENTIFICATION

Based on available information, this material is not classified as hazardous according to criteria of Safe Work Australia GHS 7.

Poison Schedule: Not Applicable

DANGEROUS GOOD CLASSIFICATION

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Quartz (SiO ₂)	14808-60-7	<81 %
Cement, portland, chemicals	65997-15-1	3 - 35 %
Fly ash	68131-74-8	15 - 20 %
Pigments	-	<10 %
Ingredients determined to be Non-Hazardous	-	Balance
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Not applicable as supplied.

Skin Contact: Not applicable as supplied.

Eye contact: If in eyes wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Ingestion: Not applicable as supplied.

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Notes to physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazchem Code: Not applicable.

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Non-combustible material.

Fire fighting further advice: Not applicable.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels).

LARGE SPILLS

Wash down where possible or vacuum with a HEPA filter all equipment and work area after work. Eliminate dry sweeping.

Dangerous Goods - Initial Emergency Response Guide No: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

Storage: Not applicable as supplied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material. However when the material is cut, ground or abraded the following is applicable:

	TWA		STEL		NOTICES
	ppm	mg/m ³	ppm	mg/m ³	
Portland cement	-	10	-	-	-
Quartz (respirable dust)	-	0.05	-	-	Carc. 1A

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

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If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the following ingredients in this material requires Health Surveillance:

Crystalline silica

For detailed information see "Guidelines for Health Surveillance (Safe Work Australia)"

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Keep exposures to dust as low as practicable. Fine dusts may contain respirable crystalline silica which is a hazardous chemical. When cutting or drilling work outside, open air is recommended. If mechanically cutting, a masonry blade grinder with dust extraction (with HEPA M class filter) can be used. Unpowered hand tools generate minimal dust when cutting, so a manual roof tile cutter is recommended when cutting.

Personal Protection Equipment: WEAR STANDARD SAFETY EQUIPMENT.

When handling material wear standard safety equipment – including safety shoes.

When cutting or mechanically abrading material wear safety shoes, overalls, safety glasses. Where there is risk of dust generation, a P2 particulate respirator is to be used in accordance with AS/NZS 1715 and AS/NZS 1716. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly and kept in clean storage when not in use. Protective gloves should be worn when cutting, however, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using

Hygiene measures: Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Solid
Colour: Various colours
Odour: None

Solubility: Immiscible with water
Specific Gravity: 1.9 - 2.1
Relative Vapour Density (air=1): N App
Vapour Pressure: N App
Flash Point (°C): N App
Flammability Limits (%): N App
Autoignition Temperature (°C): N App
Melting Point/Range (°C): N Av
Boiling Point/Range (°C): N Av
pH: N App
Viscosity: N App
Total VOC (g/Litre): N App

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: This material is thermally stable when stored and used as directed.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: None known.

Hazardous decomposition products: None known.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Not applicable as supplied. If material is cut or mechanically abraded may be an irritant to mucous membranes and respiratory tract.

Skin contact: Not applicable as supplied. If material is cut or mechanically abraded, contact with skin may result in irritation.

Ingestion: Not applicable as supplied. If material is cut or mechanically abraded swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye contact: Not applicable as supplied. If material is cut or mechanically abraded may be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Acute toxicity

Inhalation: This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients): $LC_{50} > 5.0$ mg/L for dust.

Skin contact: This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients): $LD_{50} > 2,000$ mg/Kg bw

Ingestion: This material has been classified as not hazardous for acute ingestion exposure. Acute toxicity estimate (based on ingredients): $LD_{50} > 2,000$ mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as not an aspiration hazard.

Specific target organ toxicity (single exposure): This material has been classified as not a specific hazard to target organs by a single exposure.

Chronic Toxicity

Mutagenicity: This material has been classified as not a mutagen.

Carcinogenicity: This material has been classified as not a carcinogen.

Reproductive toxicity (including via lactation): This material has been classified as not a reproductive toxicant.

Specific target organ toxicity (repeat exposure): This material has been classified as not a specific hazard to

target organs by repeat exposure.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): > 100 mg/L

Long-term aquatic hazard: This material has been classified as not hazardous for chronic aquatic exposure. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log K_{ow} < 4.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

MARINE TRANSPORT

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

AIR TRANSPORT

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

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material/constituent(s) is covered by the following requirements:

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic

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Goods Act (Commonwealth): Not Applicable.

AICIS Status: All components of this product are listed on or exempt from the Australian Inventory of Industrial Chemicals (AIIC).

16. OTHER INFORMATION

Reason for issue: Revised

This Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd on behalf of its client.

Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.

Roof Tile Cutting Guide

Controlling workplace exposure of respirable crystalline silica



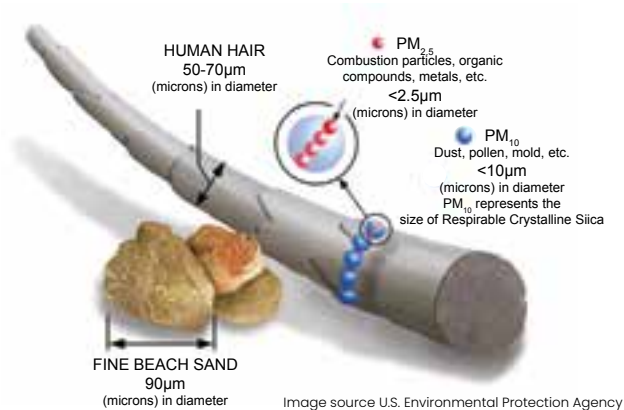
WHAT IS CRYSTALLINE SILICA?

Crystalline Silica is found naturally in stone, rocks, sand, gravel and clay.










WHAT IS RESPIRABLE CRYSTALLINE SILICA DUST?

Respirable crystalline silica is dust generated from materials and products containing crystalline silica. It is released when mechanically treated (e.g. cutting, sawing, abrading such as rasping, scraping, grinding down, chasing or crushing). This dust is of concern due to its size as it gets caught deep in your lungs and can cause long term damage. .

CSR has conducted tests which have determined the amount of crystalline silica that may become respirable size particles when cutting or grinding terracotta and concrete tiles.



CSR has made the following recommendations, in order of the hierarchy of controls.

<p>ELIMINATION TILE CUTTER</p>	<p>Process below exposure limits when using the controls shown</p>  <ul style="list-style-type: none"> • Cut roof tiles using a hand tile cutter 	
<p>ENGINEERING DUST EXTRACTION</p>	<p>Process below exposure limits when using the controls shown</p>  <ul style="list-style-type: none"> • Create a 5mm score using a 5inch grinder with attached on tool extraction (M or H Class industrial vacuum) • 1 person activity (maximum 2 hours work duration) 	
<p>PPE RESPIRATORY PROTECTION</p>	<p>Short Duration Controlled Cutting below exposure limits</p>  <ul style="list-style-type: none"> • 5mm depth cut using a 5 inch grinder • 1 person activity for maximum 1 hour duration • Clean shaven, fit tested P2 mask critical control 	
<p>NO CONTROLS</p>	<p>Uncontrolled Cutting exceeds exposure limits</p>  <ul style="list-style-type: none"> • Tiles cut completely through with grinder • Grinder used without on tool extraction over 1 hour • Respirator mask DOES NOT adequately protect 	
<p>CLEAN UP</p>	 <ul style="list-style-type: none"> • Eliminate dry sweeping • Use vacuum system with HEPA filter fitted to clean up where required • Dust extraction – vacuum bag is sealed (double bag for additional safety) and safely disposed of with trade waste • Worker must be clean shaven and wear a fit tested P2 mask 	

Independent testing was conducted by Safe Environments Pty Limited to EN 689 and ISO 16258-1 (NATA accreditation 17139).



The activity of grinding both concrete and terracotta tiles has been assessed and is considered low risk when people are trained in the task, equipment is used and maintained to manufacturer requirements and all controls as indicated are correctly in place.

Regular monitoring of people conducting this activity is required to verify controls are effective in managing the risk of exposure to respirable crystalline silica.

Disclaimer. It is the responsibility of the user to review and confirm applied controls meet exposure standards.