

# RESPIRABLE CRYSTALLINE SILICA

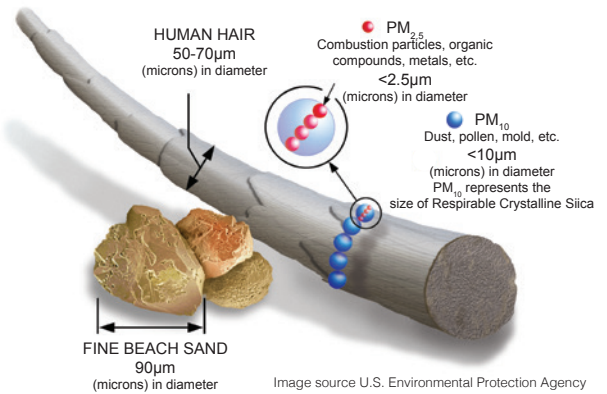
WORKPLACE EXPOSURE IS PREVENTABLE



**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 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 conducting those activities. (Hebel tested at under 4% RCS in dust generated)



## CSR has made the following recommendations, in accordance with the Hierarchy of Controls.

<b>WET CUTTING</b>	<p><b>Process meets exposure limits when using the controls shown</b></p> <ul style="list-style-type: none"> <li>Wet cutting provides the lowest airborne concentration levels</li> <li>Cut in an outdoor environment or a well-ventilated cutting room (with air movement of between 500 and 1000 m3/h)</li> <li>Use a circular saw with a retrofitted attachment with continuous water applied to the cutting surface and blade</li> <li>Worker must be clean shaven and wear a fit tested P2 mask</li> <li>Refer clean-up process below</li> </ul>	
<b>DUST EXTRACTION</b>	<p><b>Process meets exposure limits when using the controls shown</b></p> <ul style="list-style-type: none"> <li>Cut in outdoor environment or well-ventilated cutting room (with air movement of between 500 and 1000 m3/h)</li> <li>Plunge saw or circular saw (enclosed blade is preferred) fitted with on-tool dust extraction, M or H Class industrial vacuum</li> <li>Cut 2-5mm from full thickness of panel and support with cutting board in place (cutting board prevents escape of any residual dust)</li> <li>Stand on the enclosed side of the saw shroud and upwind</li> <li>Worker must be clean shaven and wear a fit tested P2 mask</li> </ul>	
<b>RESPIRATORY PROTECTION EQUIPMENT</b>	<p><b>Short duration activity - RPE is required in addition to Engineering Controls to meet exposure standards</b></p> <ul style="list-style-type: none"> <li>Rasping 1 person activity (under 1 hour)</li> <li>Worker must be clean shaven and wear a fit tested P2 mask</li> </ul>	
<b>NO CONTROLS = NO CUTTING</b>	<p><b>Uncontrolled cutting exceeds exposure limits – DO NOT CUT</b></p> <ul style="list-style-type: none"> <li>Dry cutting without on tool local exhaust ventilation extraction</li> <li>Cutting with on tool extraction in an enclosed space without mechanical ventilation</li> <li>P2 mask DOES NOT provide adequate protection, even when fit tested and clean shaven</li> <li>Must be used in conjunction with Engineering Controls in place</li> </ul>	
<b>CLEANING</b>	<ul style="list-style-type: none"> <li>Wet cutting - slurry must be mixed with a quarter of a bag of Hebel Adhesive to harden before disposal in trade waste</li> <li>Dust extraction – vacuum bag is sealed (double bag for additional safety) and safely disposed of with trade waste</li> <li>Use vacuum system with HEPA filter fitted to clean up where required</li> <li>Avoid dust creation (e.g. by sweeping)</li> <li>Worker must be clean shaven and wear a fit tested P2 mask</li> </ul>	

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



**Independent testing conducted April 2021**

The activity of cutting Hebel panels 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 highly recommended.**

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

For more information contact 1300 369 448 or visit our website [www.hebel.com.au](http://www.hebel.com.au)

[hebel.com.au](http://hebel.com.au) | [csr.com.au](http://csr.com.au)



# New Zealand Safety Data Sheet



## NON-Hazardous, NON-Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

**Product name:** Hebel Autoclaved Aerated Concrete

**Recommended use:** Fire protection, building blocks, noise suppression, construction blocks.

Synonyms	Product Code
Hebel PowerPanelXL	-
Hebel PowerPanel	-
Hebel PowerPanel 50	-
Hebel PowerPanel+	-
Hebel PowerFloor	-
Hebel PowerFloor+	-
Hebel PowerFence	-
Hebel PowerBlock	-
Hebel PowerBlock+	-
Hebel PowerShield	-
Hebel SoundBarrier	-

**Supplier:** CSR Building Products (NZ) Limited (trading as CSR Hebel)  
**Company No.:** 9429 040 750 194  
**Street Address:** 14 The Furlong  
Takanini, Auckland, 2112  
New Zealand  
**Telephone:** 0800 4 HEBEL (0800 443 235)  
**Email:** info@hebel.co.nz

**Emergency Telephone number:** 0800 443 235 (Mon - Fri, 8am - 5pm excl. public holidays)

### 2. HAZARDS IDENTIFICATION

Based on available information, this material is not classified as hazardous according to criteria of EPA New Zealand.

The fine dust in/on the supplied product may include respirable crystalline silica. Cutting, breaking, drilling, sawing, grinding and finishing may generate dust which is **Hazardous**. Recommendations on Exposure Controls/Personal Protection (see Section 8 below) should be followed.

**EPA Group Standard:** NA - 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".

# New Zealand Safety Data Sheet



## 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Calcium silicate hydrate	1344-95-2	<60 - 80
Quartz (SiO <sub>2</sub> )	14808-60-7	20 - 40
Cement, portland, chemicals	65997-15-1	<10
Additives	-	<5
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:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Skin Contact:** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

**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:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.

**PPE for First Aiders:** Wear safety shoes, overalls, gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**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

Dust is best cleaned up by wet sweeping and/or vacuuming to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure. Bag waste materials.

### LARGE SPILLS

Collect and dispose of large pieces. Dust is best cleaned up by wet sweeping and/or vacuuming to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure. Bag waste materials.

**Dangerous Goods - Initial Emergency Response Guide No:** Not applicable

## 7. HANDLING AND STORAGE

**Handling:** Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of dust.

**Storage:** No special storage requirements.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**National occupational exposure limits:**

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Calcium silicate	-	10	-	-	-
Portland cement	-	10	-	-	-
Crystalline Silica - Quartz (respirable dust)	-	0.05	-	-	6.7A 2019

As published by WorkSafe New Zealand.

**WES-TWA (Workplace Exposure Standard - Time-weighted average).** The average airborne concentration of a substance calculated over an eight-hour working day.

**WES-Ceiling (Workplace Exposure Standard - Ceiling).** A concentration that should not be exceeded at any time during any part of the working day.

**WES-STEL (Workplace Exposure Standard - Short-term exposure limit).** The 15-minute time weighted average exposure standard. Applies to any 15-minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Exposures at concentrations between the WES-TWA and the WES-STEL should be less than 15 minutes, should occur no more than four times per day, and there should be at least 60 minutes between successive exposures in this range.

**6.7A - Confirmed carcinogen.** Carcinogen - known or presumed human carcinogen: the substance is either known to be carcinogenic to humans, or data indicates sufficient evidence in animal studies to demonstrate a causal relationship between human exposure and the development of cancer, or an increase in tumours.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too 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.

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 WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated

**Engineering Measures:** Keep exposures to dust as low as practicable. If power tools are used, they should be fitted with an efficient and well maintained on tool dust extraction device with a HEPA M class filter. Use a plunge saw with a specifically designed concrete blade.

# New Zealand Safety Data Sheet



Work in the open air and within external openings (such as doors and windows in buildings) is recommended. Local mechanical ventilation/extraction may be required to control airborne dust levels. Unpowered hand tools generate less dust when cutting or sanding. If generated dust cannot be avoided follow personal protection recommendations. Use a vacuum fitted with a HEPA M class filter instead of sweeping when cleaning dust generated from concrete panels.

**Special Consideration for Repair and/or Maintenance of Contaminated Equipment:** Where possible vacuum or wash down all gear, equipment or mobile plant prior to maintenance and repair work. If compressed air cleaning cannot be avoided, recommendations on Exposure Control and Personal Protection should be followed.

**Personal Protection Equipment:** SAFETY SHOES, OVERALLS, GLOVES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

When handling autoclaved aerated concrete, the use of a respirator is not required. When using power tools for cutting, drilling and sanding, personal respiratory protection must be used to reduce exposure to the level of airborne respirable crystalline silica such as a P2 particulate respirator 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.

Wear safety shoes, overalls, gloves. Available information suggests that gloves made from leather should be suitable for intermittent contact. 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:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Solid
<b>Colour:</b>	Off-white
<b>Odour:</b>	Odourless
<b>Solubility:</b>	Insoluble in water
<b>Specific Gravity:</b>	0.4 – 0.7
<b>Relative Vapour Density (air=1):</b>	N App
<b>Vapour Pressure (20 °C):</b>	N App
<b>Flash Point (°C):</b>	N App
<b>Flammability Limits (%):</b>	N App
<b>Autoignition Temperature (°C):</b>	N App
<b>Melting Point/Range (°C):</b>	N App
<b>Boiling Point/Range (°C):</b>	N App
<b>pH:</b>	N App
<b>Viscosity:</b>	N App
<b>Total VOC (g/Litre):</b>	N App

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

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Stable

# New Zealand Safety Data Sheet



**Conditions to avoid:** Dust generation

**Incompatible materials:** Strong acids

**Hazardous decomposition products:** None

**Hazardous reactions:** None

## 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:** Material may be an irritant to mucous membranes and respiratory tract.

**Skin contact:** Contact with skin may result in irritation.

**Ingestion:** Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

**Eye contact:** 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 non-hazardous. Acute toxicity estimate (based on ingredients): LC50 > 5 mg/L

**Skin contact:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg bw

**Ingestion:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >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 non-hazardous.

**Specific target organ toxicity (single exposure):** This material has been classified as non-hazardous.

### Chronic Toxicity

**Mutagenicity:** This material has been classified as non-hazardous.

**Carcinogenicity:** This material has been classified as non-hazardous.

**Reproductive toxicity (including via lactation):** This material has been classified as non-hazardous.

**Specific target organ toxicity (repeat exposure):** This material has been classified as non-hazardous.

**Crystalline Silica:** Long term occupational over-exposure or prolonged breathing-in (or inhalation) of crystalline silica dust at levels above the TWA carries the risk of causing serious and irreversible lung disease, including bronchitis, and silicosis (scarring of the lung), including acute and/or accelerated silicosis. It may also increase the

# New Zealand Safety Data Sheet



risk of other irreversible and serious disorders including scleroderma (a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders.

**Specific Toxic Effects:** Inhalation of dust, including crystalline silica dust, is considered by medical authorities to increase the risk of lung disease due to tobacco smoking.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

**Long-term aquatic hazard:** This material has been classified as non-hazardous. 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)

# New Zealand Safety Data Sheet



International Convention for the Prevention of Pollution from Ships (MARPOL)

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

- All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

**EPA Group Standard:** NA - Not Applicable

<b>16. OTHER INFORMATION</b>
------------------------------

Reason for issue: First issue.

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.