

CSR MATERIAL SAFETY DATA SHEET

Autoclaved Aerated Concrete

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	Autoclaved Aerated Concrete
Other Names:	Hebel AAC, Hebel Closure Blocks, Hebel Floor Panels, Hebel Freeway Barriers, Hebel Lintels, Hebel Sill Blocks, Hebel Stair Panels, Hebel Stair Treads, Hebel Wall Panels, Powerpanel, Powerwall, Sonobloks, Thermobloks
Product Codes/Trade Names:	Autoclaved Aerated Concrete
Recommended Use:	Fire Protection, Building Blocks, Noise Suppression, Construction Blocks
Applicable In:	Australia
Supplier:	CSR Building Products Limited ABN 55 008 631 356
Address:	Triniti 3, 39 Delhi Road, North Ryde, NSW 2113, Australia
Telephone:	+61 2 9235 8000 (or 1800 807 668 (available in Australia only))
Email Address:	http://www.csr.com.au/Pages/ContactUs.aspx
Web Site:	www.csr.com.au
Facsimile:	+61 2 9372 5819
Emergency Phone Number:	000 Fire Brigade and Police (available in Australia only)
Poisons Information Centre:	13 11 26 (available in Australia only)

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with National standards and guidelines from Safe Work Australia (SWA – formerly ASCC/NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or Standards, Codes, Guidelines, or Regulations.

SECTION 2: HAZARD IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: The product as supplied is **non-Hazardous**. Dust from this product is classified as **Hazardous** according to the Approved Criteria For Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

Autoclaved Aerated Concrete is classified as **Non-Dangerous Goods** according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

When concrete products are cut, sawn, abraded or crushed, dust is created which contains crystalline silica, some of which may be respirable (particles small enough to go into the deep parts of the lung when breathed in), and which is **Hazardous**.

The following risk and safety phrases refer **ONLY** to the dust of these products:

Risk Phrases	Safety Phrases
R48/20: Danger of serious damage to health by prolonged exposure through inhalation.	S22: Do not breathe dust.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Synonyms:	Proportion:	CAS Number:
Calcium silicate hydrate	Tobermorite	<60-80%	1344-95-2
Crystalline silica	Quartz	20-40%	14808-60-7
Portland cement	-	10-60%	65997-15-1
Additives	-	<5%	-

Note: Cement in concrete contains traces (2-20 ppm) of Chromium VI (hexavalent).

SECTION 4: FIRST AID MEASURES

The following advice refers mainly to exposure to concrete dust following cutting or crushing of product.

Swallowed:	Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention.
Eyes:	Flush thoroughly with flowing water, while holding eyelids open, for 15 minutes to remove all traces. If symptoms such as irritation or redness persist, seek medical attention.
Skin:	Remove heavily contaminated clothing. Wash off skin thoroughly with water. Use a mild soap if available. Shower if necessary. Seek medical attention for persistent redness, irritation or burning of the skin.
Inhaled:	Remove to fresh air, away from dusty area. If symptoms persist, seek medical attention.
Advice to Doctor:	Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammability:	This product is non flammable.
Suitable extinguishing media:	Use carbon dioxide, foam, dry chemical or water spray as required for fire in surrounding materials.
Hazards from combustion products:	None
Special protective precautions and equipment for fire fighters:	None
HAZCHEM Code:	None allocated

SECTION 6: ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and clean up:	<p>Collect and reuse where possible. Avoid generating dust.</p> <p>Dust is best cleaned up by vacuum device to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure. Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed during spill clean-up if conditions are dusty.</p>
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SECTION 7: HANDLING AND STORAGE

Precautions for safe handling:	Concrete is a heavy material, and appropriate control of manual handling risk is required. Manual handling should be in accordance with Manual Handling Regulations and Codes.
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Conditions for safe storage:	No special requirements. Safety aspects of stockpiles and storage areas require risk assessment and control.
Incompatibilities:	None

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards:	<p>National Occupational Exposure Standard (NES), Safe Work Australia (formerly ASCC/NOHSC)</p> <p>Crystalline silica (quartz): TWA – 0.1 mg/m³ respirable dust. (≤ 7 microns particle equivalent aerodynamic diameter)</p> <p>Calcium silicate dust: TWA - 10 mg/m³</p> <p>Total dust (of any type or particle size): TWA - 10 mg/m³</p>
Notes on Exposure Standards:	<p>All occupational exposures to atmospheric contaminants should be kept to as low a level as is workable (practicable) and in all cases to below the National Standard.</p> <p>TWA (Time Weighted Average): the time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.</p>
Biological Limit Values:	No biological limit allocated.
ENGINEERING CONTROLS	
<input type="checkbox"/> Ventilation:	When dry concrete dust is present, ensure exposures to respirable crystalline silica (quartz) are maintained below NES. Work in the open air and external openings (such as doors and windows in buildings) generally provides adequate ventilation. Local mechanical ventilation or extraction may be required in areas where dust could escape into the working environment. Local dust extraction and collection may be used, if necessary, to control airborne dust levels. Hand tools generate less dust when cutting, drilling or sanding. If power tools are used they should be fitted with efficient and well maintained dust extraction devices. If generated dust cannot be avoided, follow personal protection recommendations.
<input type="checkbox"/> Special Consideration for Repair &/or Maintenance of Contaminated Equipment:	Recommendations on Exposure Control and Personal Protection should be followed. When dry concrete dust is present, ensure exposures to respirable crystalline silica (quartz) are maintained below NES. 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, wear eye and respiratory protection and clothing as listed below.
PERSONAL PROTECTION	
<input type="checkbox"/> Personal Hygiene	Wash hands before eating, drinking, using the toilet, or smoking. Wash work clothes regularly.
<input type="checkbox"/> Skin Protection:	Wear loose comfortable clothing and gloves (standard duty leather or equivalent AS 2161).
<input type="checkbox"/> Eye Protection:	Safety glasses with side shields or safety goggles (AS/NZ 1336) or a face shield should be worn.
<input type="checkbox"/> Respiratory Protection:	None required if engineering and handling controls are adequate to minimize dust generation and dust exposure. Where engineering and handling controls are not enough to minimise exposure to dust, personal respiratory protection may be required.

	The type of respiratory protection required depends primarily on the concentration of the respirable crystalline silica dust in the air, and the frequency and length of exposure time. Amount of exertion required during the work, and personal comfort are other considerations in choice of respirator. A suitable P1 or P2 particulate respirator chosen and used in accordance with AS/NZS 1715 and AS/NZS 1716 may be sufficient for many situations, but where high levels of dust are encountered, more efficient cartridge-type or powered respirators or supplied-air helmets or suits may be necessary. Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white blocks
Odour:	None
pH, at stated concentration:	8-10
Vapour Pressure:	Not applicable
Vapour Density:	Not applicable
Boiling Point/Range (°C):	Not applicable
Freezing/Melting Point (°C):	Not determined
Solubility In Water:	Not soluble
Specific Gravity (H₂O = 1):	0.4-0.7
FLAMMABLE MATERIALS	
<input type="checkbox"/> Flash Point:	Not applicable
<input type="checkbox"/> Flammable (Explosive) Limits:	Not applicable
<input type="checkbox"/> Autoignition Temperature:	Not applicable
ADDITIONAL PROPERTIES	
<input type="checkbox"/> Evaporation Rate:	Not applicable
<input type="checkbox"/> % Volatiles:	0%
<input type="checkbox"/> Volatile Organic Compounds Content (VOC): (as specified by the Green Building Council of Australia)	None

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable
Incompatible Materials:	None
Conditions to avoid:	Dust generation
Hazardous Decomposition Products:	None
Hazardous Reactions:	None

SECTION 11: TOXICOLOGICAL INFORMATION

The following advice refers mainly to exposure to concrete dust following cutting or crushing of product.

No specific toxicology data available, but toxicity of this product is anticipated to be very low with LD50 >5,000mg/kg.

Health effects information is based on reported effects in use from overseas and Australian reports.

Health Effects: Acute (short term)

Swallowed:	Unlikely under normal industrial use, but swallowing the dust from this product may result in abdominal discomfort.
Eyes:	Dust is irritating to the eyes causing watering and redness. Exposure to dust may aggravate pre-existing eye conditions.
Skin:	The dust from this product, particularly in association with heat and sweat, may cause irritation. The dust is not absorbed through the skin but, may be mildly irritating and drying to the skin due to its physical characteristics.
Inhaled:	Dust is mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.

Health Effects: Chronic (long term)

Eyes:	Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions.
Skin:	Repeated heavy contact with the dust may cause drying of the skin and can result in skin rash (dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected.
Inhaled:	Repeated exposure to the dust may result in increased nasal and respiratory secretions and coughing. Inflammation of lining tissue of the respiratory system may follow repeated exposure to high levels of dust with increased risk of bronchitis and pneumonia.

Additional Notes

Long Term Effects:	Long term occupational over-exposure or prolonged breathing-in (or inhalation) of crystalline silica dust at levels above the NES carries the risk of causing serious and irreversible lung disease, including bronchitis, and silicosis (scarring of the lung). It may also increase the 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. SWA has not classified crystalline silica as a carcinogen.
Special 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.

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity:	Products as delivered are not biodegradable, have low ecotoxicity and are not regarded as posing any ecological risk. Crushed product and dust may form a mildly alkaline or neutral slurry when mixed with water.
Persistence and Degradability:	Product is persistent and would have a low degradability.
Mobility:	A low mobility would be expected in a landfill situation.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods and containers:	Autoclaved Aerated Concrete can be treated as a common waste for disposal in accordance with local authority guidelines. Crushed product and dust should be kept out
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	of storm water and sewer drains. Measures should be taken to prevent dust generation during disposal, and exposure and personal precautions should be observed (see above).
Special precautions for landfill or incineration:	Autoclaved Aerated Concrete can be dumped into a landfill site in accordance with local authority guidelines.

SECTION 14: TRANSPORT INFORMATION

UN number:	None allocated
UN Proper Shipping Name:	None allocated
Class and Subsidiary Risk :	None allocated
Packaging Group:	None allocated
Special Precautions for User:	None
HAZCHEM code:	None allocated

SECTION 15: REGULATORY INFORMATION

Poisons Schedule:	None Scheduled
Exposures by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations (State) as they are applicable to Respirable Crystalline Silica, requiring exposure assessment, controls and health surveillance (ASCC/NOHSC).	

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

CSR Building Products Limited (ABN 55 008 631 356), Triniti 3, 39 Delhi Road, North Ryde, NSW 2113, Australia.

Phone: +61 2 9372 5888 or 1800 807 668 (available in Australia only)

Fax: +61 2 9372 5877

ADDITIONAL INFORMATION

Australian Standards References:

AS/NZS 1336	Recommended Practices for Occupational Eye Protection
AS/NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716	Respiratory Protective Devices
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)

Other References:

NOHSC:2011(2003)	National Code of Practice for the Preparation of Material Safety Data Sheets 2 nd Edition, April 2003, National Occupational Health and Safety Commission.
NOHSC:10005(1999)	List Of Designated Hazardous Substances, April 1999, National Occupational Health and Safety Commission, Sydney.
NOHSC:2007(1994)	National Code of Practice for the Control of Workplace Hazardous Substances (Australian States have similar Codes of Practice in each State).
NOHSC: 2012(1994)	National Code of Practice for the Labelling of Workplace Substances, March 1994, Australian Government Publishing Service, Canberra.

NES	National Occupational Exposure Standards for workplace Atmospheric Contaminants (NES) Australian Safety and Compensation Council, ASCC (Formerly NOHSC) 1995 as amended.
ADG Code	Australian Dangerous Goods Code 7 th Edition.

AUTHORISATION

Reason for Issue:	5-yearly review and update
Authorised by:	Operations Manager
Date of Issue:	1/06/2011

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END OF MSDS