



MATERIAL SAFETY DATA SHEET

Product Name: Autoclaved Aerated Concrete
Australia

STATEMENT OF HAZARDOUS NATURE: This product is classified as not hazardous according to the criteria of the National Occupational Health & Safety Commission, Australia. However, dust generated from the cutting, drilling or grinding of this product is hazardous.

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IMPORTANT NOTICE: This Material Safety Data Sheet (MSDS) is issued by CSR Limited, in accordance with National Occupational Health & Safety Commission (NOHSC) guidelines. As such, the information in it must not be altered, deleted or added to. CSR Limited will issue a new MSDS when there is a change in product specifications and/or NOHSC guidelines/regulations. CSR Limited will not accept any responsibility for any changes made to its MSDS by any other person or organisation.

Product name:	Autoclaved Aerated Concrete
Applicable In:	Australia
Other Names:	AAC, Hebel AAC, ALC, PowerPanel, Powerwall, Themobloks, Sonobloks, Hebel Wall Panels, Hebel Floor Panels, Hebel Lintels, Hebel Stair Treads, Hebel Stair Panels, Hebel Freeway Barriers, Hebel Sill Blocks, Hebel Closure Blocks
Manufacturer's Product Code:	Not Applicable
UN number:	None Allocated
Dangerous goods class & Subsidiary Risk:	None Allocated
Hazchem code:	None Allocated
Poisons schedule number:	None Scheduled
Use:	For walls, floors and roof in general building applications. Also used for sculpturing, artwork and other decorative applications

Physical Description/Properties:

Appearance:	AAC is off-white in colour and is manufactured as blocks panels and lintels. Blocks are generally cut to size, 600 mm long x 200 mm wide with thickness ranging from 50 mm to 375 mm. Reinforced panels and lintels are up to 6000 mm long and contain a corrosion-protected steel reinforcing mesh.
Boiling Point: (°C)	Not Determined
Melting Point: (°C)	Not Determined
Vapour pressure:	Non Volatile

Specific gravity (H₂O = 1)	0.4 - 0.7 (approximately - depending on grade)
Flashpoint:	Not Applicable
Flammability Limits:	Not Flammable
Solubility in water:	Not Soluble
Odour Threshold:	Slight cement odour
pH, at stated concentration	8.0-10 (see note 1)

Ingredients:

Chemical Name:	CAS Number:	Proportion:	Exposure Limits *
Tobermorite (hydrated calcium silicate)	1344-95-2	60-80%	10 mg/m ³ TWA inspirable dust (note 2)
Crystalline Silica	14808-60-7	20-40%	0.2 mg/m ³ TWA respirable dust (note 2)
Other non hazardous ingredients	-	<5%	

Notes:

- Surface pH tested on saturated AAC samples.
- Total dust from the blocks has been analysed by optical microscopy and laser techniques, and approximately 6.0% found to be in the respirable range (particles <7.0 micron diameter). However, the dust in the respirable range fraction consisted primarily of tobermorite. Respirable quartz is present as only one to two percent of the total dust. There are no fibrous particles in the ingredients nor in the final product. As is the case with all masonry and cement product, dusts will be produced if the blocks are cut, drilled, chased or sanded. If power tools without dust extraction devices are used, inspirable and respirable dust levels may exceed the occupational exposure standards.
- The raw materials used to manufacture Hebel AAC are:

Sand	CAS Number 14808-60-7	<60%
Cement	CAS Number 15998-15-1	<25%
Lime (Calcium Oxide)	CAS Number 1305-78-8	<15%
Gypsum (Calcium Sulphate)	CAS Number 7778-18-9	<7%
Water		to 100%

HEALTH HAZARD INFORMATION

Note: The blocks and panels in their intact state do not release airborne dusts, but dusts of calcium silicate and crystalline-silica (quartz) may be produced during cutting, drilling, grinding, chasing and other machining of the product. The known health effects of calcium silicate and crystalline-silica (quartz) are as follows:

Health Effects*Acute:*

- Swallowed:** Unlikely under normal conditions of use, but swallowing the dust may result in abdominal discomfort.
- Eye:** The dust is irritating and corrosive to the eyes causing watering and redness and may result in corneal inflammation and ulceration.
- Skin:** The dust, particularly in association with heat and sweat, may irritate the skin, resulting in itching and occasionally a red rash.
- Inhaled:** The dust may irritate the nose, throat and lungs, especially in people with upper respiratory tract or chest complaints such as asthma.

Chronic:

- Skin:** Repeated skin contact with the dust may cause sensitisation in some people resulting in chronic irritant dermatitis.
- Inhaled:** Repeated exposure to the dust may result in increased nasal and respiratory secretions and coughing. Because of the presence of respirable quartz (crystalline silica), repeated and prolonged exposure to high dust levels may result in silicosis and an

increased risk of lung cancer. The International Agency for Research on Cancer (IARC) has evaluated crystalline silica as " Group 1 - Carcinogenic to humans ".

First Aid

- Swallowed: Give plenty of water to drink to dilute stomach contents and do not induce vomiting.
- Eye: Flush thoroughly with flowing water for at least 15 minutes. If symptoms/ irritation or redness persists, seek medical attention.
- Skin: Wash thoroughly with mild neutral soap and water. Seek medical attention if any irritation to the skin.
- Inhaled: Remove to fresh air. Seek medical attention if any respiratory symptoms.
- First Aid Facilities: Eyewash station and washing facilities.

Advice to Doctor: Treat symptomatically.

PRECAUTIONS FOR USE

- Exposure Standards: None Allocated from NOHSC.
There is no specific standard for Autoclaved Aerated Concrete but the standards for calcium silicate containing <1.0% crystalline-silica and crystalline-silica (quartz) should apply.
Respirable Silica-crystalline: 0.2 mg/cubic metre time-weighted average (TWA)
Inspirable calcium silicate dust: 10.0 mg/cubic metre time-weighted average (TWA).
- Engineering Controls: During the normal laying of the product, no significant dust problem should occur. If, however, the product is cut or machined, the following precautions should be applied:
Hand tools should be used for cutting, drilling or sanding. If the use of power tools is necessary, the power tools must be fitted with efficient and well maintained dust extraction devices.
Alternatively thoroughly wetting the blocks with water before and during cutting, drilling or sanding should reduce the amount of dust generated, but may not effectively control respirable dust.
Work areas should be well ventilated and cleaned at least daily. Dust must be removed by vacuum cleaners, by sweeping after dampening, or by hosing if approved waste water collection systems are available.
- Special Considerations for Repair / Maintenance: Clean equipment used for cutting, drilling, grinding, chasing or sanding AAC before repair or maintenance.
- Personal Protection:
- Skin Protection: Loose comfortable clothing should be worn. Direct skin contact should be avoided when handling AAC by wearing long sleeved shirts and long trousers, a cap or hat. Light weight leather or equivalent gloves (AS 2161) is recommended to reduce the risk of abrasion and irritation of the skin. Work clothes should be washed regularly and separately from other clothes. After handling AAC blocks, wash hands with mild soap and water. Do not scratch or rub the skin if it becomes irritated.
- Eye Protection: Ventilated non-fogging dust resistant goggles (AS 1336) should be worn when working in a dusty environment or when working overhead.
- Respiratory Protection: A class P1 or P2 replaceable filter or disposable half face-piece particulates respirator should be worn when using power tools for wet or dry cutting, drilling, chasing, routing or other machining, or when dust is generated by other

processes. Respirators should comply with AS/NZS 1716 and be selected, used and maintained in accordance with AS/NZS 1715.

Personal Hygiene: Wash face and hands before eating or drinking after handling this product.

Flammability: This product is not flammable, does not support combustion of other materials and does not cause dust explosions.

SAFE HANDLING INFORMATION

Storage and Transport: No special storage requirements are considered necessary other than to keep the product within its supplied packaging until ready for use. Loose grit from the surface of the blocks does not pose a health risk but should be periodically removed from the floor to prevent it being ground to fine particles by mobile equipment or pedestrians. No special transport requirements are necessary.

Spills and disposal: Dust from the blocks should be cleaned up by vacuuming or wet-sweeping. Off-cuts and waste should be placed in containers and disposed of at approved landfill sites in accordance with local waste disposal authority guidelines.

Fire/explosion hazard: Non-combustible and non-flammable.

Smoking and Other Dust: Inhalation of airborne particles from other sources, including those from cigarette smoke, may increase the risk of lung disease. Smoking increases the risk of bronchitis, silicosis (scarring of the lung) and lung cancer in persons exposed to silica dust. CSR recommends that all storage and work areas should be smoke-free zones, and other airborne contaminants be kept to a minimum.

CONTACT POINT

For further information on this product, please contact the following:
CSR Limited (ABN 90 000 001 276), 9 Help Street, Chatswood NSW 2067, Australia. Phone +61 2 9235 8000 or 1800 807 668 (available in Australia only). Fax +61 2 93725819.

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