CSR SAFETY DATA SHEET
Autoclaved Aerated Concrete (for NZ)

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Autoclaved Aerated Concrete (for NZ)**
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:	New Zealand
Supplier:	CSR Hebel, a division of CSR Building Products (NZ) Limited
Address:	Unit 3, 38b Birmingham Drive, Christchurch 8024, New Zealand
Telephone:	+64 3 336 5500
Email Address:	info@csrhebel.co.nz
Web Site:	www.csrhebel.co.nz
Facsimile:	+64 3 335 0725
Emergency Phone Number:	111 Police, Ambulance and Fire Brigade (available in NZ only)
Poisons Information Centre:	0800 POISON (764 766) (available in NZ only)

This Safety Data Sheet (SDS) is issued by the Supplier in accordance with New Zealand Workplace Exposure Standards. 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 SDS by any other person or organization. The Supplier will issue a new SDS 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**. It is a manufactured article, and is exempt under NZ HSNO.

Autoclaved Aerated Concrete is classified as **Non-Dangerous Goods** according to the NZ Transport of Dangerous Goods on Land.

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 would be classifiable as **Hazardous** according to NZ EPA.

The following Hazard and Precautionary Statements refer ONLY to the dust of these products:

Hazard Statements	Precautionary Statements
Irritating to eyes, respiratory system and skin. Danger of serious damage to health by prolonged exposure through inhalation.	Do not breathe dust.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Proportion:	CAS Number:
Calcium silicate hydrate	<60-80%	1344-95-2
Crystalline silica	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:	Collect and reuse where possible. Avoid generating dust. 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.

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.

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

Exposure Standards:	**Workplace Exposure Standards and Biological Exposure Indices, NZ Department of Labour** Crystalline silica (quartz): TWA – 0.1 mg/m^3 respirable dust. (≤ 7 microns particle equivalent aerodynamic diameter) Calcium silicate dust: TWA - 10 mg/m^3 Portland cement: TWA – 10 mg/m^3 as inspirable dust Total dust (of any type or particle size): TWA - 10 mg/m^3
Notes on Exposure Standards:	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 Workplace Exposure Standard (WES). 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.
Biological Limit Values:	No biological limit allocated.
ENGINEERING CONTROLS	
☐ **Ventilation:**	When dry concrete dust is present, ensure exposures to respirable crystalline silica (quartz) are maintained below WES. 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.
☐ **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 WES. 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	
☐ **Personal Hygiene**	Wash hands before eating, drinking, using the toilet, or smoking. Wash work clothes regularly.
☐ **Skin Protection:**	Wear loose comfortable clothing and gloves (standard duty leather or equivalent NZS 2161).
☐ **Eye Protection:**	Safety glasses with side shields or safety goggles (NZS 1336) or a face shield should be worn.

☐ **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 NZS 1715 and 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 New Zealand Standards mark and are fitted and maintained correctly.

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 (H_2O = 1):	0.4-0.7
FLAMMABLE MATERIALS	
☐ **Flash Point:**	Not applicable
☐ **Flammable (Explosive) Limits:**	Not applicable
☐ **Autoignition Temperature:**	Not applicable
ADDITIONAL PROPERTIES	
☐ **Evaporation Rate:**	Not applicable
☐ **% Volatiles:**	0%

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 international 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 WES 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. Any respirable fraction present in dust generated from this product has not been shown to be a carcinogenic risk.
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 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

HSNO Approval No:	This is a manufactured article, and is exempt under NZ HSNO
Poisons Schedule:	None Scheduled

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

CSR Building Products (NZ) Limited, Unit 3, 38b Birmingham Drive, Christchurch 8024, New Zealand

Phone:	+64 3 336 5500
Fax:	+64 3 335 0725

ADDITIONAL INFORMATION

New Zealand Standards References:

NZS 1336	Recommended Practices for Occupational Eye Protection
NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
NZS 1716	Respiratory Protective Devices
NZS 2161	Occupational Protective Gloves
NZS 5433	Transport of Dangerous Goods on Land

Other References:

NOHSC:1008 (2004)	Approved Criteria for Classifying Hazardous Substances
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).
WES	Workplace Exposure Standards and Biological Exposure Indices, 6th Edition, July 2011, NZ Department of Labour.
HSNO CoP 8-1	Code of Practice for the Preparation of Safety Data Sheets, September 2006, NZ EPA.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 3rd revised edition, United Nations, New York and Geneva, 2009.

AUTHORISATION

Reason for Issue:	SDS for use in New Zealand
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END OF SDS