STODDART SAFETY DATA SHEET

Autoclaved Aerated Concrete

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. (AAC tested at under 4% RCS in dust generated)

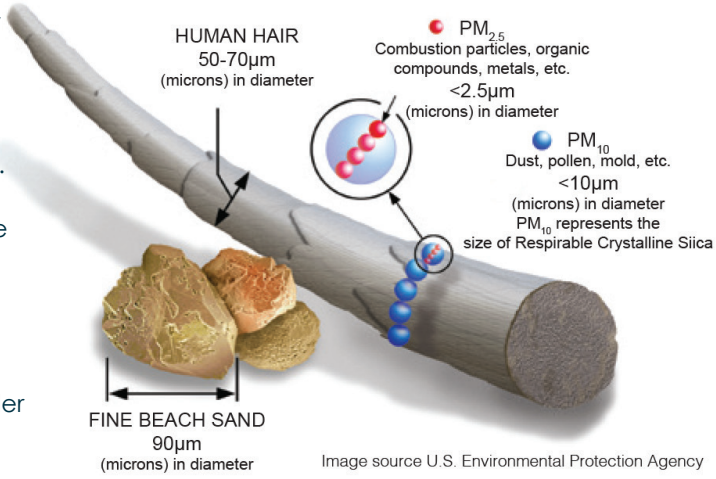

Image source U.S. Environmental Protection Agency

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

WET CUTTING	Process meets exposure limits when using the controls shown • Wet cutting provides the lowest airborne concentration levels • Cut in an outdoor environment or a well-ventilated cutting room (with air movement of between 500 and 1000 m3/h) • Use a circular saw with a retrofitted attachment with continuous water applied to the cutting surface and blade • Worker must be clean shaven and wear a fit tested P2 mask • Refer clean-up process below
DUST EXTRACTION	Process meets exposure limits when using the controls shown • Cut in outdoor environment or well-ventilated cutting room (with air movement of between 500 and 1000 m3/h) • Plunge saw or circular saw (enclosed blade is preferred) fitted with on-tool dust extraction, M or H Class industrial vacuum • Cut 2-5mm from full thickness of panel and support with cutting board in place (cutting board prevents escape of any residual dust) • Stand on the enclosed side of the saw shroud and upwind • Worker must be clean shaven and wear a fit tested P2 mask
RESPIRATORY PROTECTION EQUIPMENT	Short duration activity - RPE is required in addition to Engineering Controls to meet exposure standards • Rasping 1 person activity (under 1 hour) • Worker must be clean shaven and wear a fit tested P2 mask
NO CONTROLS = NO CUTTING	Uncontrolled cutting exceeds exposure limits – DO NOT CUT • Dry cutting without on tool local exhaust ventilation extraction • Cutting with on tool extraction in an enclosed space without mechanical ventilation • P2 mask DOES NOT provide adequate protection, even when fit tested and clean shaven • Must be used in conjunction with Engineering Controls in place
CLEANING	• Wet cutting - slurry must be mixed with a quarter of a bag of Hebel Adhesive to harden before disposal in trade waste • Dust extraction – vacuum bag is sealed (double bag for additional safety) and safely disposed of with trade waste • Use vacuum system with HEPA filter fitted to clean up where required • Avoid dust creation (e.g. by sweeping) • 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).

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	Autoclaved Aerated Concrete
Other Names:	STAAC AAC, STAAC Closure Blocks, STAAC Floor Panels, STAAC Lintels, STAAC Sill Blocks.
Product Codes/Trade Names:	Autoclaved Aerated Concrete
Recommended Use:	Fire Protection, Building Blocks, Noise Suppression, Construction Blocks
Applicable In:	Australia
Supplier:	Stoddart Cladding Systems Pty Ltd
Address:	37 Gravel Pit Road, Darra, QLD 4076
Telephone:	07 3725 5999
Email Address:	info@Stoddarts.com.au
Website:	www.Stoddarts.com.au
Facsimile:	07 3725 5999
Emergency Phone Number:	000 Fire Brigade and Police (available in Australia only)
Poisons Information Centre:	13 11 26 (available in Australia only)

This Safety Data Sheet (SDS) 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 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: HAZARDS 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.

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 GHS classifications refer ONLY to the dust of these products:

GHS CLASSIFICATION	GHS SIGNAL WORD	GHS PICTOGRAM/S
Skin Irritation Category 2 Eye Irritation Category 2A Specific Target Organ Toxicity (Single Exposure) Category 3 Specific Target Organ Toxicity (Repeated Exposure) Category 2	**WARNING**	

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

GHS HAZARD STATEMENTS	GHS PRECAUTIONARY STATEMENTS
H315 – Causes skin irritation H319 – Causes serious eye irritation H335 – May cause respiratory irritation H373 – May cause damage to organs through prolonged or repeated exposure by inhalation	P260 – Do not breathe dust. P264 – Wash thoroughly after handling. P271 – Use only outdoors or in a well-ventilated area. P280 – Wear eye/face protection and protective gloves. P302 + P352 – If on skin, wash with plenty of soap and water. P304 + P340 – If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 – If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 – Call a Poison Centre or doctor if you feel unwell. P332 + P313 – If skin irritation occurs, get medical advice/attention. P337 + P313 – If eye irritation persists, get medical advice/attention. P362 – Take off contaminated clothing and wash before reuse. P403 + P233 – Store in a well-ventilated place and keep container tightly closed.

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

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	Concrete	10-60%	65997-15-1
Additives	Glenium, Superplasticiser	<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.

GHS HAZARD STATEMENTS	GHS PRECAUTIONARY STATEMENTS
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 FIREFIGHTING MEASURES

Suitable extinguishing media:	Use carbon dioxide, foam, dry chemical or water spray as required for fire in surrounding materials.
Specific hazards:	None
Special protective equipment and precautions for firefighters:	As required for fire in surrounding materials.
HAZCHEM Code:	None allocated

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Avoid generating dust. Recommendations on Exposure Controls / Personal Protection (see Section 8 below) should be followed during spill clean-up if conditions are dusty.
Environmental precautions:	None required.
Methods and materials for containment and cleaning up:	Collect and reuse where possible. 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.

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 for Airborne Contaminants, Safe Work Australia** Crystalline silica (quartz): TWA – 0.1 mg/m3 respirable dust. (7 microns particle equivalent aerodynamic diameter) Calcium silicate dust: TWA - 10 mg/m3 Portland cement: TWA – 10 mg/m3 as inspirable dust Total dust (of any type or particle size): TWA - 10 mg/m3
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 AS 2161).
☐ Eye Protection:	Safety glasses with side shields or safety goggles (AS 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 AS 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 Australian Standards mark and are fitted and maintained correctly.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white blocks
Odour:	None
Odour threshold:	No biological limit allocated.
pH:	8-10
Melting point/Freezing point:	Not determined
Initial boiling point and range:	Not applicable
Vapour pressure:	Not applicable
Vapour density:	Not applicable
Specific gravity (Relative density):	0.4-0.7
Solubility:	Not soluble
Evaporation rate:	Not applicable
Partition coefficient (n-octanol/water):	Not determined
Viscosity:	Not applicable
Flammability:	
Flash point:	Not applicable
Upper/lower flammability or explosive limits:	Not applicable
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not determined
% Volatiles:	0%
Volatile Organic Compounds (VOC) Content: (as specified by the Green Building Council of Australia)	None

SECTION 10: STABILITY AND REACTIVITY

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

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 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.
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.

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

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.
Bioaccumulative potential:	There is no evidence to suggest bioaccumulation will occur.
Mobility in soil:	A low mobility would be expected in a landfill situation.

SECTION 13: DISPOSAL CONSIDERATIONS

Autoclaved Aerated Concrete can be treated as a common waste for disposal or dumped into a landfill site 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 Section 8 above).

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:

Stoddarts Cladding Systems Pty Ltd, 37 Gravel Pit Road, Darra, QLD, 4076

Phone:	+61 7 3725 5999
Fax:	+61 7 3725 5999

ADDITIONAL INFORMATION Australian Standards References:	
AS 1336	Recommended Practices for Occupational Eye Protection
AS 1715	Selection, Use and Maintenance of Respiratory Protective Devices
AS 1715	Respiratory Protective Devices
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)

OTHER REFERENCES:	
NOHSC:1008 (2004)	Recommended Practices for Occupational Eye Protection
Model Code of Practice:	Selection, Use and Maintenance of Respiratory Protective Devices
Model Code of Practice:	Respiratory Protective Devices
Model Code of Practice:	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
WHS	Guidance on the Classification of Hazardous Chemicals under the WHS Regulations, April 2012, Safe Work Australia.
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, National Transport Commission.
WES	Workplace Exposure Standards for Airborne Contaminants, April 2013, Safe Work Australia.
WES	Guidance on The Interpretation Of Workplace Exposure Standards For Airborne Contaminants, April 2013, Safe Work Australia.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS), 3rd revised edition, United Nations, New York and Geneva, 2009.
GHS	Understanding the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), United Nations, New York and Geneva, 2010.
HSIS	Hazardous Substances Information System (HSIS), internet advisory service, Safe Work Australia.
HCIL	GHS Hazardous Chemical Information List (HCIL), internet advisory service, Safe Work Australia.

AUTHORISATION

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END OF SDS