SVC
SINCE 1948

MATERIAL SAFETY DATA SHEET

PRECAST CONCRETE PRODUCTS

ISSUE DATE: 04 APRIL 2017

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Precast Concrete Products**
Other Names:	None
Recommended Use:	Concrete products have a wide variety of applications in buildings and civil engineering projects.
Applicable in:	Australia
Supplier:	SVC Products Pty Ltd
Address:	38 Japaddy St Mordialloc VIC 3195 Australia
Telephone:	1300 287 782
Facsimile:	+61 3 9586 2629
Website:	www.svc.com.au
Emergency Phone Number:	000 - Fire Brigade and Police (in Australia only)
Poisons Information Centre:	13 11 26 (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.

Precast Concrete Products are 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
Portland cement		10-20%	65997-15-1
Aggregate containing crystalline silica (quartz)	Sand, crushed stone, gravel	20-85%	14808-60-7
Water		< 20%	7732-18-5
OTHER INGREDIENTS MAY BE ADDED:			
Steel rod and bar		< 10%	-
Supplementary cementitious materials such as fly ash, blast furnace slag, silica fume (amorphous silica)		< 20%	-
Admixtures such as water reducers, set retarders, set accelerators, plasticisers, and waterproofing agents (refer AS 1478)		< 1%	-

Notes: Crystalline-silica (quartz) may be a constituent of sand, crushed stone, gravel, blast furnace slag and fly ash used in any particular concrete mix. Cement in concrete contains traces of Chromium VI (hexavalent). Cementitious additives may contain traces of metals.

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 for 15 minutes to remove all traces. If symptoms such as irritation or redness persist, seek medical attention.
Skin:	Remove heavily contaminated clothing immediately. Wash off skin thoroughly with water. Use a mild soap if available. Shower if necessary. Seek medical attention for persistent 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:	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:	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:	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

National Exposure Standards:	**National Occupational Exposure Standard (NES), Safe Work Australia (formerly ASCC/NOHSC)** Crystalline silica (quartz): TWA - 0.1mg/m^3 respirable dust. (≤ 7 microns particle equivalent aerodynamic diameter) 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 National Standard. 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 NES. Work in the open air, and the opening of 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. 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 NES. Where possible, vacuum or wash down all gear, equipment or mobile plants 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/NZ 1336) or a face shield should be worn.
☐ **Respiratory Protection:**	None required if engineering and handling controls are adequate to minimise 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid concrete - grey colour
Odour:	Cement odour
pH, at stated concentration:	> 7.0
Vapour Pressure:	Not applicable
Vapour Density (air = 1):	Not applicable
Boiling Point/ Range (°C):	Not applicable
Melting Point (°C):	> 1200
Solubility in water:	Not soluble, or slightly soluble. Reacts on mixing with water forming an alkaline (caustic) solution (pH > 11).
Specific Gravity (H_2O = 1):	2.5
Flash Point:	Not applicable
Flammable (Explosive) Limits:	Not applicable
Autoignition Temperature:	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions
Conditions to avoid:	None
Incompatible Materials:	None
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 in normal use in the industrial situation. Abrasive and irritant to mouth and throat.
Eyes:	Irritating and may cause redness and watering.
Skin:	Irritating, abrasive and drying to the skin.
Inhaled:	Irritating to the nose, throat and respiratory tract causing coughing and sneezing. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.

Health Effects: Chronic (long term)

Eyes:	May cause inflammation of the cornea.
Skin:	Repeated contact causes irritation and drying of the skin and can result in skin reddening and skin rash (dermatitis) which may become persistent. Persons who are allergic to chromium may develop an allergic dermatitis. Where dermatitis becomes established, secondary infection of the skin may occur.
Inhaled:	May cause inflammation of lining tissue of the respiratory system, and pre-existing diseases including asthma and bronchitis may be aggravated. Repeated inhalation of dust containing crystalline silica can cause bronchitis, silicosis (scarring of the lung), and may increase the risk of other serious disorders including scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs).

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:	Precast 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:	Precast 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:	Not 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

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 2nd 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 7th Edition.

END OF MSDS