MATERIAL SAFETY DATA SHEET (MSDS)
SUNMIX Premix Concrete

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	Sunmix Premixed Concrete
Applicable in	Australia
Recommended Use	Premixed concrete is used in a wide variety of applications in building and civil engineering projects. When sprayed it is used for encapsulating steel work as well as structural applications
Company	Sunmix Concrete Pty Ltd 5 Marble Drive Kingston QLD 4114 ABN 97 010 972 871
Contact	1300 786 649
Emergency Contact	1300 786 649

This Material Safety Data Sheet (MSDS) is issued by Sunmix Concrete Pty Ltd in accordance with the Australian Safety and Compensation Council ASCC (formally National Occupation Health and Safety Commission - NOHSC) guidelines. The information in it must not be altered, deleted or added to. Sunmix Concrete Pty Ltd will issue a new MSDS when there is a change in product specifications and/or ASCC/NOHSC guidelines/regulations. Sunmix Concrete Pty Ltd will not accept any responsibility for any changes made to its MSDS by any other person or organisation.

SECTION 2: HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: classified as **Hazardous** according to the criteria of the Australian Safety & Compensation Council ASCC. Approved Criteria for Classifying Hazardous Substances (NOHSC:1008) 3rd Edition.

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

RISK PHRASES		SAFETY PHRASES	
R21/22	Harmful in contact with skin and if swallowed	S22	Do not breathe dust
R43	May cause sensitisation by skin contact	S24/25	Avoid contact with skin and eyes
R48/20	Danger of serious damage to health by prolonged exposure through inhalation	S28	After contact with skin wash immediately with plenty of water
		S29	Do not empty into drains
		S36/37/39	Wear suitable protective clothing, gloves and eye/face protection

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Synonyms	Proportion	CAS Number
Main Ingredients			
Portland Cement		10-60%	65997-15-1
Aggregate	Sand, crushed stone, gravel, slag	>85%	14808-60-7
Water		<20%	7732-18-5
Other Ingredients			
Polypropylene or Steel		<10%	
Polystyrene beads (reduced density)		<10%	9003-53-6
Metallic oxide pigments (colouring)		<4%	
Silica fume (amorphous silica)		<4%	7699-41-4
Admixtures, such as water reducers, set retarders, set accelerators, plasticisers, and waterproofing agents (refer AS 1478)		<1%	
Blast furnace slag or Flyash		<20%	

Note: 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

Swallowed	Rinse mouth and lips with water. Do not induce vomiting. Give water to drink to dilute stomach contents . 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. If wet concrete is splashed in the eye, always treat as above, and get urgent medical attention.
Skin	Remove heavily contaminated clothing immediately. Wash off skin thoroughly with water. Uses 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.
First Aid Facilities	Eye wash station, wash facilities
Advice to Doctor	Treat symptomatically. Wet concrete burns to skin or eye may result in corrosive caustic burns. Ingestion of significant amounts of concrete is unlikely. Do not induce emesis or perform gastric lavage. Neutralisation with acidic agents is not advised because of increased risks of exothermic burns. Water-mineral oil soaks may aid in removing hardened concrete from the skin. Ophthalmological opinion should be sought for ocular burns.

SECTION 5: FIRE FIGHTING MEASURES

Flammability	Non flammable
Suitable extinguishing media	Not applicable
Hazards from combustion products	None
Special protective precautions and equipment for fire fighters	None
HAZCHEM code	None allocated

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures	Recommendations on exposure control and personal protection should be followed during spill clean-up.
Spills	If spillage is dry, shovel into containers. Avoid generating dust. If spillage is wet, shovel into containers and then wash down area with water but prevent run-off from entering storm water and sewer drains and watercourses.

SECTION 7: HANDLING AND STORAGE

Handling	Wet concrete is a heavy material, and appropriate control of manual handling risk is required when barrowing, shoveling or carrying quantities of wet concrete.
Storage	Wet premixed concrete has a limited life after batching and will set hard. The rate of setting depends on the ambient conditions and amount of agitation. May be stored for very short periods of time (less than twenty minutes) in self-cleansing hoppers with sides at an angle of at least 45° to the horizontal.
Incompatibilities	Contact with sugars, acids or solutions of either will cause a serious degradation of the quality of the material. A safety hazard is created by such contact due to the potential failure of the structure being constructed. Similarly handling and transporting the material at temperatures less than 0°C or greater than 30°C may cause a degradation of the quality of the material with a consequent safety hazard arising from the potential failure of the structure being constructed

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards	National Occupational Exposure Standard (NES), Safe Work Australia (formerly ASCC/NOHSC) Crystalline silica (quartz): 0.1 mg/m3 TWA (time-weighted average) as respirable dust. (⍰⍰7 microns particle equivalent aerodynamic diameter).
Engineering Controls	
Ventilation	If placing concrete in enclosed areas or a confined space, ensure adequate forced ventilation. When dry concrete dust is present, ensure exposures to respirable crystalline silica (quartz) are maintained below NES. Local mechanical ventilation may be required in areas where spray droplets from wet concrete or dry dust could escape into the work environment.
Special Consideration for Repair and/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
Personal Protection	
Skin Protection	Minimise contact with concrete materials. When handling wet concrete, mortar or grout personnel should wear loose comfortable protective clothing and impervious boots, (AS/NZS 4501), suitable impervious gloves such as PVC (AS 2161). Never

	kneel in wet concrete, or allow extended contact of skin with wet concrete. Remove clothing which has become contaminated with wet or dry concrete to avoid prolonged contact with the skin. If concrete gets into boots, remove socks and boots immediately and wash skin thoroughly.
Eye Protection	Avoid contact with eyes. Splash resistant Safety Glasses with side shields, safety goggles (AS/NZ 1336), or a face-shield should be worn
Respiratory Protection	In dusty environments use a respirator (filter mask) such as Class P1 or P2(AS/NZS 1715 and AS/NZS 1716).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Pre-mixed Concrete is a plastic mixture of water, cementitious materials, and aggregates. The latter are usually sand and stone or gravel. Its plasticity ranges from near liquid to a friable damp earth-like mixture. The most common plasticity has a cohesive porridge-like appearance. The colour is usually grey. If special concretes with pigments are used the colour may range from near-white to any other colour.
Odour	Some added ingredients used in concrete may create a small of ammonia
pH at stated concentration	> 7.0
Vapour Pressure	Not determined
Vapour Density	Not determined
Boiling Point/Range	Not determined
Freezing/Melting Point	Melting point > 1200degC
Solubility in water	Not soluble or slight, reacts on mixing with water forming an alkaline (caustic) solution (pH >11)
Specific Gravity (H20 = 1)	2.5
Flash Point	Not applicable
Flammable (Explosive) Limits	Not applicable
Auto ignition Temperature	Not applicable

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability	Chemically Stable
Incompatible Materials	Sugars, acids or solutions of either
Conditions to Avoid	Keep away from water when plastic
Hazardous Decomposition Products	None
Hazardous Reactions	None

SECTION 11: TOXICOLOGICAL INFORMATION

Health Effects (Acute)	
Swallowed	Unlikely in normal use in the industrial situation. Abrasive and highly irritant (burning) to mouth and throat. May cause nausea, and stomach cramps
Eyes	Irritating and may cause alkaline (caustic) burns to the eyes. Splash of wet concrete into the eye can cause serious and rapid corrosive burning, with potential for permanent loss of vision.

Skin	Irritating, abrasive and drying to the skin. May cause alkaline (caustic) burns if direct contact is made with wet concrete for any length of time, leading to second or even third degree burns
Inhaled	Concrete dust is 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	In dust form it 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
Inhaled	In dust form it may cause inflammation of lining tissue of the respiratory system. 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 irreversibly lung disease, including bronchitis and silicosis. It may also increase the risk of other irreversible and serious disorders including scleroderma and other auto-immune disorders. Crystalline silica is not classified as a carcinogen
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	Product forms an alkaline 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	Pre-Mixed Concrete can be treated as a common waste for disposal or dumped into a landfill site in accordance with local authority guidelines. Keep 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	Premixed concrete can be dumped into a landfill site in accordance with local authority guidelines

SECTION 14: TRANSPORT INFORMATION

Transport Requirements	Transport equipment should be strong enough to contain a fluid with an effective specific gravity of 2.5
UN Number	None
UN Proper Shipping Name	None
Class and Subsidiary Risk	None
Packaging Group	None
HAZCHEM code	None

SECTION 15: REGULATORY INFORMATION

Classification	Hazardous according to ASCC/NOHSC criteria and not classified as Dangerous Goods.
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

Australian Standards References	
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
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
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
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

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