

**PRODUCT NAME: CONCRETE, PRE-MIXED CONCRETE**

**1. IDENTIFICATION OF MATERIAL AND SUPPLIER**

**Supplier Name:** ENTIRE CONCRETE PTY LTD  
**Address:** 18 Magpie Street, McDougalls Hill, Singleton, NSW 2330.  
**Telephone:** 02 65 713144  
**Fax:** 02 65 713166  
**Emergency:** 02 65 713144  
**Email:** admin@entireconcrete.com.au  
**Web Site:** www.entireconcrete.com.au  
**Synonym(s):** Ready-mix concrete, Grout, Mortar  
**Use(s):** Premixed concrete is used for a wide variety of building and construction appliances.  
**Other Information:** Plastic concrete begins to harden about one hour after delivery and is quite hard within eight hours. The rate of setting and MPa (compressive strength) depends on ambient conditions (temperature, wind and humidity) and the concentration of cementitious ingredients.

**2. HAZARDS IDENTIFICATION**

**HAZARDOUS SUBSTANCE**

**NON DANGEROUS GOODS**

- Classified as Hazardous according to the criteria of the Australian Safety and Compensation Commission ASCC (formerly NOHSC) (Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008] 3<sup>rd</sup> Edition.)
- This product may contain Crystalline Silica. Crystalline Silica dust is classified as hazardous.
- The solid product as supplied is classified as non-hazardous.
- Dust created when the product is cut, abraded, or crushed may contain crystalline silica some of which may be respirable (particles small enough to go into the deep parts of the lung when breathed in.)
- A proportion of the fine dust in/on the supplied product may be respirable crystalline silica.

**HAZARD STATEMENT**

**H332:** Harmful by inhalation (applies to concrete dust.)  
**H312:** Harmful in contact with skin.  
**H302:** Harmful if swallowed.  
**H317:** May cause sensitisation by skin contact.  
**H373:** Danger of serious damage to health by prolonged exposure through inhalation (Applies to concrete dust.)



**PRECAUTIONARY STATEMENT**

**P260:** Do not breathe dust.  
**P264:** Toxic in contact with skin.  
**P264:** Toxic if swallowed.  
**P280:** After contact with skin, wash immediately with plenty of water.  
**P501:** Do not empty into drains.  
**P281:** Wear suitable protective coating.  
**P281:** Wear suitable gloves.  
**P281:** Wear eye/face protection.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient	CAS No.	Content
Sand (Containing Silica (Quartz)):	14808-60-7	20-85%
Crushed Stone, Gravel or Blast Furnace Slag:	Not Required	20-85%
Portland Cement:	65997-15-1	10-60%
Chromium VI:	1333-82-0	2-20ppm
Water:	7732-18-5	0-20%
<b>Other Ingredients May be Added:</b>		
Blast Furnace Slag or Fly Ash:		0-20%
Pozzolans:		0-10%
Pigments (metallic oxide colours):		0-10%
Silica Fume (amorphous silica):	7699-41-4	0-10%
Chemical Admixtures:		2-10%
Polystyrene Balls:	9003-53-6	0-60% by volume
Polypropylene Fibres:		0-10%
Steel Fibres:		0-10%

**NOTE:**

- Chromium VI is a trace impurity in Portland Cement
- Portland cement, Sand, Crushed Stone, Gravel, Blast Furnace Slag and Fly Ash may contain crystalline silica (quartz). Depending on source of the material for the above ingredients, the crystalline silica content of the final product can vary from product to product.
- Cementitious additives may contain traces of metals.

**4. FIRST AID MEASURES**

<b>Eye:</b>	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.
<b>Inhalation:</b>	Remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have a qualified person give oxygen through a face mask if breathing is difficult. If irritation develops seek medical attention.
<b>Skin:</b>	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.
<b>Ingestion:</b>	Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention.
<b>Advise to Doctor:</b>	Treat symptomatically or consult a Poisons Information Centre.
<b>First Aid Facilities:</b>	Eye wash and normal washroom facilities.

**5. FIRE FIGHTING MEASURES**

**Flammability:** Not flammable or combustible.



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**Fire and Explosion:** None.  
**Extinguishing:** Not applicable.  
**Special protective precautions and equipment for fire fighters:** None.  
**Hazchem Code:** None allocated.

**6. ACCIDENTAL RELEASE MEASURES**

**Spillage:**

- Dust is best cleaned up by a 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.
- Plastic concrete;
  - Recover spilled material by shovelling into containers and using mechanical sweepers, but avoid generating dust. Prevent spillage or wash down water from entering sewer drains, stormwater and watercourses.
  - If contamination of drains or watercourses has occurred, advise the relevant state environment protection agency and the company.

**Disposal:**

- May be disposed of as inert landfill in accordance with local authority regulations.

**7. STORAGE AND HANDLING**

**Storage:** No special storage requirements  
**Handling:** Prevent all contact with skin. Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet.  
**Transport:** Not classified as a Dangerous Goods, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (6<sup>th</sup> Edition.)  
**Proper Shipping Name:** None Allocated.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

The following applies to dust from this product:

**Exposure Limits:**

**National Occupational Exposure Standard (NES) Australian Safety and Compensation Commission ASCC (formerly NOHSC)**

**Exposure to dust should be kept as low as practicable, and below the following NES:**

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**Crystalline silica (quartz): 0.1 mg/m<sup>3</sup> TWA (time-weighted average) as respirable dust.**

**Total dust 90 of any type, or particle size): 10 mg/m<sup>3</sup> TWA**

**Chromium VI: 0.05 mg/m<sup>3</sup> - sensitiser**

**Engineering Controls:**

All work should be carried out in such a way as to minimise dust generation, and exposure to dust.  
Mechanical ventilation: Dust extraction and collection may be used, if necessary, to control airborne dust levels.  
Work areas should be cleaned regularly.

**PPE**

**Skin:**

Prevent all contact with skin.

When handling wet concrete personnel should wear loose comfortable clothing and impervious boots, suitable protective/impervious gloves.

Contact with plastic concrete will cause severe irritation and possible chemical burns, cement dermatitis and dry skin.

- Portland cement is alkaline in nature so plastic concrete and mortars are strongly alkaline (pH of 12-13.) Strong alkalis, like strong acids, are harmful or caustic to the skin. This may produce alkali burns.
- Portland Concrete is hygroscopic – it absorbs water. Plastic concrete needs water to harden. It will draw water away from any other material in contacts, including skin. This will irritate and dry the skin.

Ensure a high level of personal hygiene is maintained when using this product. That is; always wash hands before eating, drinking, smoking or using the toilet.

Remove all contaminated clothing. Wash gently and thoroughly with tepid water and non-abrasive soap. If irritation develops and persists seek medical attention. Wash hands before eating or smoking.

**Eye/Face:**

Safety glasses with side shields or safety goggles (AS/NZ 1336) or a face shield should be worn.

Plastic concrete will cause severe irritation in contact with the eyes, which will result in redness, stinging and lachrymation. Alkaline properties may produce severe alkali burns or serious eye damage.

Dry concrete dust may cause mechanical irritation resulting in redness and lachrymation.

**Respiratory:**

Where engineering and handling controls are not enough to minimise exposure to total dust and to respirable crystalline silica, 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/NZ 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

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maintained correctly.  
 For dust levels approaching or exceeding the NES (see above) a more effective particulate respirator providing a greater protection factor should be worn. Procedures for effective use of respirators should be applied and supervised. Do not contaminate the home environment with dusty work clothes and shoes. Do not shake out work clothes before laundering.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	A mouldable generally grey mixture which will set and harden to become a stable colour. Colour may vary from near white to any other colour.	<b>Particle Size:</b>	A proportion of the dust may be respirable (below 10 microns) and if it becomes airborne constitutes an exposure if inhaled.
<b>Odour:</b>	Some added ingredients used in concrete may create a smell of ammonia.	<b>Solubility (Water):</b>	Not soluble. Can react on mixing with water forming an alkaline solution with pH > 11
<b>Specific Gravity:</b>	2.5	<b>Vapour Density:</b>	Not determined
<b>Flash Point:</b>	Not applicable	<b>Vapour Pressure</b>	Not determined.
<b>Boiling Point/range:</b>	Not determined.	<b>Upper Explosion Limit:</b>	Not applicable
<b>Melting Point:</b>	>1200 °C	<b>Lower Explosion Limit:</b>	Not applicable
<b>pH:</b>	>7 in dry state. >10 in wet plastic state.	<b>Autoignition Temperature:</b>	Not applicable

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability:</b>	Chemically stable.
<b>Conditions to Avoid:</b>	Keep away from water. Dust generation.
<b>Material to Avoid:</b>	None
<b>Hazardous Decomposition Products:</b>	None
<b>Hazardous Reactions:</b>	None

**Crystalline silica is stable, compatible with other materials, does not polymerise, and will not decompose into hazardous by-products.**

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**11. TOXICOLOGICAL INFORMATION**

**Health Hazard Summary:**

**Acute -**

**Eye:** Plastic concrete will cause severe irritation in contact with the eyes, which will result in redness, stinging and lachrymation. Alkaline properties may produce severe alkali burns or serious eye damage.

**Inhalation:** Sprayed plastic concrete droplets and dry concrete dust may irritate the nose, throat and respiratory tract causing coughing, sneezing and breathing difficulties. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.

**Skin:** Contact with plastic concrete will cause severe irritation and possible chemical burns, cement dermatitis and dry skin.

- Portland cement is alkaline in nature so plastic concrete and mortars are strongly alkaline (pH of 12-13.) Strong alkalis, like strong acids, are harmful or caustic to the skin. This may produce alkali burns.
- Portland Concrete is hygroscopic – it absorbs water. Plastic concrete needs water to harden. It will draw water away from any other material in contacts, including skin. This will irritate and dry the skin.

**Ingestion:** Unlikely in normal use in industrial situation. Concrete is abrasive and mildly corrosive. Swallowing either plastic or hardened concrete will result in abdominal discomfort. Symptoms can include nausea, stomach cramps and vomiting.

**Health Hazard Summary:**

**Chronic -**

**Eye:** In dust form may cause inflammation of the cornea.

**Inhalation:** Plastic Concrete is not considered a chronic inhalation hazard. 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. 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) including acute and/or accelerated silicosis. It may also increase the risk of other irreversible and serious disorders including scleroderma 9a disease affecting the skin, joints, blood vessels and internal organs) and other auto-immune disorders. Inhalation of dust, including crystalline silica dust, is considered by medical authorities to increase the risk of lung disease due to tobacco smoking. The product contains a proportion of respirable free crystalline silica in the quartz component. Crystalline silica (inhaled in the form of quartz or cristobalite from occupational sources) has been classified by The International Agency for Research on Cancer (IARC) as carcinogenic to humans (group 1). However (in the view of CC&AA) the research on this is inconclusive and ASCC/NOHSC has not classified crystalline silica as a carcinogen. The most current research indicates no excess risk of lung cancer or other cancers from using these products.

**Skin:** Repeated or prolonged skin contact with plastic concrete can dry the skin and cause alkali burns due to the caustic nature of the product. This condition is described as irritant contact dermatitis. Some individuals may experience allergic dermatitis because there are trace amounts of water soluble hexavalent chromium salts



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**Other Information:** (Chromium VI) present in Portland Cement (0-20ppm). Once a person is sensitised to water soluble chromates any further skin exposure to chromates will bring back the symptoms.  
Inhalation of airborne particles from other sources in the work environment, including those from cigarette smoke, may increase the risk of respiratory diseases. It is recommended that all storage and work areas should be smoke-free zones and that other airborne contaminants should be kept to a minimum.

**12. ECOLOGICAL INFORMATION**

**Concrete:-**

**Ecotoxicity:** Product forms an alkaline slurry when mixed with water.  
**Persistence/ Degradability:** Product is persistent and would have a low degradability.  
**Mobility:** A low mobility would be expected in a landfill situation.

**Dust (Crystalline Silica):-**

**Ecotoxicity:** None toxic to aquatic and terrestrial organisms.  
**Persistence/ Degradability:** Product is not biodegradable.  
**Mobility:** Product is insoluble and is expected to have low mobility in a landfill situation.

**13. DISPOSAL CONSIDERATIONS**

**Spills and Leaks:** Plastic Concrete;  
Recover spilled material by shovelling into containers and using mechanical sweepers, but avoid generation dust. Prevent spillage or wash down water from entering sewers, drains, stormwater and watercourses.  
If contamination of drains or watercourses has occurred, advise the relevant State Environment Protection Agency and the Company.

**Waste Disposal:** May be disposed of as inert landfill in accordance with local authority regulations. Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see above.)

**14. TRANSPORT INFORMATION**

**CLASSIFIED AS A DANGEROUS GOOD BY CRITERIA OF THE ADG CODE**

	<b>LAND TRANSPORT (ADG)</b>	<b>SEA TRANSPORT (IMDG/IMO)</b>	<b>AIR TRANSPORT (IATA/ICAO)</b>
<b>UN Number:</b>	None allocated	None allocated	None allocated
<b>Proper Shipping Name:</b>	None allocated	None allocated	None allocated
<b>DG Class/Division:</b>	None allocated	None allocated	None allocated
<b>Subsidiary Risk(s):</b>	None allocated	None allocated	None allocated



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	<b>LAND TRANSPORT (ADG)</b>	<b>SEA TRANSPORT (IMDG/IMO)</b>	<b>AIR TRANSPORT (IATA/ICAO)</b>
<b>Packing Group:</b>	None allocated	None allocated	None allocated
<b>Hazchem Code:</b>	None allocated	None allocated	None allocated

**15. REGULATORY INFORMATION**

**Poison Schedule:** None allocated  
**Classification:** Hazardous according to ASCC/NOHSC criteria and not classified as Dangerous Goods

- Exposures by inhalation to high levels of dust may be regulated under the Hazardous Substances Regulations (State and Territory) as they are applicable to Respirable Crystalline Silica, requiring exposure assessment, control of inhalation exposure below NES.
- Persons who have potential for exposure above the NES may be required by Regulations to have periodic health surveillance including Chest X-Ray (see State Government Regulations and ASCC/NOHSC documentation.)

**16. OTHER INFORMATION**

**Additional Information:** For further information contact the Operations Manager at Entire Concrete Pty Ltd on 02 65 713144.

<b>Revision History:</b>	<b>Revision</b>	<b>Description</b>
	2	Standard SDS Review

**Report Status:** Entire Concrete Pty Ltd has taken all due care to make sure that the information provided in this Safety Data Sheet is based on our present knowledge and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as a guide only and is not to be considered a warranty or quality specification. All materials may present unknown hazards and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. Users are advised to make their own independent determination of suitability and completeness of information at their own risk, in relation to the particular purpose and specific circumstance. Entire Concrete Pty Ltd shall not be held liable for any loss, injury or damage (including consequential loss) which may be suffered or incurred as a consequence of the reliance of the information contained in this Safety Data Sheet. Where the information provided herein disclosed a potential hazard or hazardous ingredient, adequate warning should be provided to Workers and Users and appropriate precautions taken.

**END OF SAFETY DATA SHEET**