

Western Suburbs Concrete

ABN: 40426304484

Suppliers of Ready Mixed Concrete

1 Coombes Drive, Penrith NSW 2750

Phone 4761 6161 Fax 4761 6167

PO Box 288 Penrith NSW 2751

E-mail: alanw@wsc.com.au



27th January 2016

Product: CONCRETE, PREMIXED CONCRETE

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Details: Western Suburbs Concrete
ABN 40426304484
Address 1 Coombes Drive
Penrith NSW 2750
Tel/Fax Tel: +61 2 4761 6161 Fax: +61 2 4761 6167

Product: CONCRETE, PREMIXED CONCRETE

Other Names/Synonyms Ready-mixed concrete, Grout, Mortar, Blockfill.

Use Premixed concrete is used for a wide variety of building and construction applications

Other Information Plastic concrete begins to harden about one hour after delivery and is quite hard within eight hours. The rate of setting depends on ambient conditions (temperature, wind and humidity) and the concentration of cementitious ingredients

SECTION 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] 3rd 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.

The following Risk and Safety phrases apply to this product:

Risk Phrases:

R20: Harmful by Inhalation (applies to concrete dust)
R21: Harmful in Contact with Skin
R22: Harmful if Swallowed
R43: May cause sensitisation by skin Contact
R48: Danger of serious damage to health by prolonged exposure through inhalation (Applies to concrete dust)

Safety Phrases:

S22: Do not breathe dust
S24: Toxic in contact with skin
S24: Toxic if swallowed
S28: After contact with skin, wash immediately with plenty of water
S29: Do not empty into drains
S36: Wear suitable protective clothing
S37: Wear suitable gloves
S39: Wear eye/face protection

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

All significant constituents are listed below:

Major Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Sand Containing Crystalline 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 %

Other ingredients may be added:

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 the 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

SECTION 4: FIRST AID MEASURES

Swallowed	Rinse mouth and lips with water. Do not induce vomiting. If symptoms persist, seek medical attention
Eye	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 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.
First Aid Facilities	Eye wash and normal washroom facilities.

Advice to Doctor: Treat symptomatically or consult a Poisons Information Centre

SECTION 5: FIRE FIGHTING MEASURES

Flammability:	Not flammable or combustible
Hazards from combustion products:	None
Suitable extinguishing media:	Not applicable
Special protective precautions and equipment for fire fighters:	None
Hazchem code:	None allocated

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spills:

- 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
- Plastic concrete;
 - Recover spilled material by shoveling into containers and using mechanical sweepers, but avoid generating 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

Disposal:

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

SECTION 7: HANDLING AND STORAGE

Storage Precautions No special storage requirements

Transport Not classified as a Dangerous Goods, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (6th Edition)

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

Proper Shipping Name None Allocated

SECTION 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:-

Crystalline silica (quartz): 0.1 mg/m³ TWA (time-weighted average) as respirable dust

Total dust (of any type, or particle size): 10 mg/m³ TWA

Chromium VI: 0.05 mg/m³ -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.

Personal Protection:

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 alkalines, like strong acids, are harmful or caustic to the skin. This may produce alkali burns

- Portland cement 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

Eyes 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

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

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/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

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	A mouldable generally grey mixture which will set and harden to become a stable solid. Colour may vary from near white to any other colour
Odour	Some added ingredients used in concrete may create a smell of ammonia
Ph	>7.0 dry state. >10 in wet plastic state
Vapour Pressure	Not determined
Vapour Density	Not determined

Boiling Point/range	Not determined
Freezing/melting point	Melting point >1200 °C
Solubility	Not soluble. Can react on mixing with water forming an alkaline solution with Ph >11
Specific gravity	2.5
Flash Point	Not applicable
Upper and lower flammability	Not applicable
Limits	
Ignition Temp	Not applicable
Particle Size	A <i>proportion</i> of the dust may be respirable (below 10 microns) and if it becomes airborne constitutes an exposure if inhaled.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Chemically Stable
Condition to avoid:	Keep away from water. Dust generation.
Incompatible materials:	None
Hazardous Decomposition:	None
Products	
Hazardous Reactions:	None

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

SECTION 11: TOXICOLOGICAL INFORMATION

Health Effects

Acute -

Swallowed

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

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.

Skin

Dry concrete dust may cause mechanical irritation resulting in redness and lachrymation 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 alkalines, like strong acids, are harmful or caustic to the skin. This may produce alkali burns

- Portland cement is hygroscopic - it absorbs water. Plastic concrete needs water to harden. It will draw water away form any other material in contacts, including skin. This will irritate and dry the skin

Inhaled

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 included asthma and bronchitis may be aggravated

Chronic-

Eyes

In dust form may cause inflammation of the cornea

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 (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

Inhaled 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 (a 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

Other Information 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

SECTION 12: ECOLOGICAL INFORMATION

Concrete:
Ecotoxicity 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

Dust - Crystalline silica is non-toxic to aquatic and terrestrial organisms; is not biodegradable; is insoluble and is expected to have low mobility in landfill

SECTION 13: DISPOSAL CONSIDERATIONS

Spills & Leaks Plastic concrete;
 Recover spilled material by shoveling into containers and using mechanical sweepers, but avoid generating 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

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)

SECTION 14: TRANSPORT INFORMATION

UN Number None Allocated
UN proper Shipping name None Allocated
Class and subsidiary risk None Allocated
Packing Group None Allocated
Hazchem Code None Allocated
Special precautions for user See Above
DG class None Allocated

SECTION 15: REGULATORY INFORMATION

Classification	Hazardous according to ASCC/NOHSC criteria and not classified as Dangerous Goods
Hazard Symbol	None allocated
Poisons Schedule	None allocated

- 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, and control of inhalation exposure below the 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 relevant State Government Regulations and ASCC/NOHSC documentation)

SECTION 16: OTHER INFORMATION

Emergency Contact No

Contact For further information contact the Occupational and Health and Safety Manager Lee Hill at Western Suburbs Concrete;
1 Coombes Drive
Penrith NSW 2750

Phone 4761 6161
Fax 4761 6167
AH Peter Vicary 0400 214 111

Authorised by: Peter Vicary

Date of issue information 17-01-11 (Replace version dated 10th March 2006)

Notice: We believe the information contained in this Material Safety Data Sheet is accurate and is given in good faith, but no warranty expressed or implied is made. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Users are advised to make their own independent determination of suitability and completeness of information at their own risk, in relation to the particular purposes and specific circumstances. Since the information contained in this document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage cause by any person acting or refraining from action as a result of any information contained in this Material Safety Data Sheet.

Where the information provided herein disclosed a potential hazard or hazardous ingredient, adequate warning should be provided to employees and users and appropriate precautions taken

END OF MSDS