

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Details: Pioneer North Queensland Pty Ltd
ABN 80 068 203 734
Address Lot 5, Maconachie Street
Woree QLD 4870
Tel/Fax Tel: +61 7 4047 8300 Fax: +61 7 4047 8311
Emergency Contact No 1800 882 478

Product:

CONCRETE, PREMIXED CONCRETE

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

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 ACCORDING TO SAFE WORK AUSTRALIA CRITERIA
NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

Classification of the substance or mixture

GHS classifications

Skin Corrosion Category 1
Serious Eye Damage – Category 1
Skin Sensitisation Category 1
Specific Target Organ Toxicity (Repeated Exposure) Category 2

Label elements

Signal word WARNING Pictograms



Hazard Statement(s)

H302 – Harmful if swallowed
P280 – Wear protective gloves/clothing/eye protection.
H314 – Causes severe skin burns and eye damage
H317 – May cause an allergic skin reaction
H318 - Causes serious eye damage
H373 – May cause damage to lungs by inhalation (dust from dried product)



Prevention Statement(s)

- P260 - Do not breathe dust.
- P264 – Wash thoroughly after handling.
- P270 – Do not eat, drink or smoke when using this product
- P272 – Contaminated work clothing should not be allowed out of the workplace
- P280 - Wear protective gloves/ protective clothing.

Response Statement(s)

- P301 + P330 – If swallowed, rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 – If on skin, immediately remove all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 – If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to
- P312 – Call a Poison Centre or doctor if you feel unwell.
- P314 Get medical advice/attention if you feel unwell.
- P333 + P313 – If skin irritation or rash occurs, get medical advice/attention.
- P363 – Wash contaminated clothing before reuse.

Storage Statement(s)

None Allocated

Disposal Statement(s)

- P501 Dispose of contents/container in accordance with relevant regulations.

Other Hazards

- This product may contain crystalline silica. Crystalline silica dust is classified as Hazardous.
- The product, when it solidifies 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.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

All significant constituents are listed below:

Major Ingredients

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
Sand	14808-60-7	20 – 85 %
Containing Crystalline Silica (Quartz)		
Crushed Stone, Gravel or Blast Furnace Slag.	NA	20 – 85 %
Portland cement	65997-15-1	10 – 60 %
Chromium VI	1333-82-0	2-20 ppm
Water	7732-18-5	0 - 20 %

Other ingredients may be added:

Blast Furnace Slag or Fly Ash Pozzolans		0-20%
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 persists 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 shovelling 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:

Workplace Exposure Standards for Airborne Contaminants, Safe Work Australia.

- Exposure to dust should be kept as low as practicable, and below the following NES:-
- Crystalline silica (quartz): 0.05 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

All occupational exposures to atmospheric contaminants should be kept to as low as reasonably 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.

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.

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/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 moldable 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 0C
Solubility	Not soluble. Can react on mixing with water forming an alkaline solution with Ph >11
Specific gravity	2.4 to 2.5 (water=1)
Flash Point	Not applicable
Upper and lower flammability Limits	Not applicable
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: Products	None
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 (short term)-

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

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 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

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 (long term) -

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	<p>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.</p> <p>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).</p>
Other Information	<p>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.</p>

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity	Product forms an alkaline slurry when mixed with water
Persistence and Degradability	Product is persistent and is non-degradable
Mobility	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 and Leaks

- 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 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

- 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 SWA (ASCC/NOHSC documentation))



SECTION 16: OTHER INFORMATION

Emergency Contact No (All hours)

1800 882 478

Emergency Contact No (Office Hours)

Contact For further information contact the Risk Manager at your nearest PNQ office;

Queensland

Lot 5, Maconachie Street

Woree QLD 4870

Ph: (07) 4047 8300

Fax: (07) 4047 8311

Authorised by: Paul Johnston

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END OF SDS