

SAFETY DATA SHEET

Telephone: (07) 5573 8000
Fax: (07) 5573 2908
ABN 23 010 119 981

PRODUCT: PREMIXED CONCRETE**SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER**

Product: **Premixed Concrete**

Other Names: Concrete, Pool Spray

Use: As a material used extensively in concrete for building construction and civil engineering activities.

Company Details: **NUCON PTY LTD**
Address: **Hart Street, Upper Coomera, QLD, 4209**

Telephone: **07 5573 8000**

Other Information: N/A

SECTION 2: HAZARD IDENTIFICATION**HAZARDOUS SUBSTANCE****NON- DANGEROUS GOOD**

This product contains crystalline silica. Crystalline silica is classified as hazardous. (Australian Safety and Compensation Commission ASCC (formerly NOHSC) Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008] 3rd Edition)

The solid product as supplied is classified as non-Hazardous. Dust in/on the supplied product or created when the product is cut, abraded, or crushed contains 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

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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

All significant constituents are listed below:

| Ingredient | CAS | Proportion |
|-----------------|--------------|---|
| Portland Cement | 65997-15-1 | 0 – 60% |
| (Chromium VI) | 1333-82-0 | 2-20ppm (trace impurity in Portland cement) |
| Crushed Stone: | Not Required | 20 – 85% |
| Sand: | 14808-60-7 | 20 – 85% |
| Water | 7732-18-5 | 0 – 20% |

Other ingredients may be added:

| | | |
|-------------------------------------|-----------|---------|
| Blast Furnace Slag or Fly Ash: | | 0 – 20% |
| Pozzolands: | | 0 – 10% |
| Pigments: (metallic oxide colours): | | 0 – 10% |
| Silica Fume (amorphous silica): | 7699-41-4 | 0 – 10% |
| Chemical Admixtures: | | 1 – 10% |
| Polypropylene fibres: | | 0 – 10% |
| Steel fibres: | | 0 – 10% |

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

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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 (cement or Fly Ash) is best cleaned up by vacuum device to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure.

Plastic Concrete: Recover spilled materials by shovelling into containers and using mechanical sweeper, but avoid generating dust. Prevent spillage or wash down water from entering sewer drains, stormwater and water courses.

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

Avoid breathing dust. Respirable dusts can be generated during manufacture, 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.

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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

The following applies to dust from this product:

Exposure Standards: National Occupational Exposure Standard (NES) Australian Safety and Compensation Council, 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. (≤ 7 microns particle equivalent aerodynamic diameter).
Total dust (of any type, or particle size): 10 mg/m³ TWA.

Engineering Controls:**Ventilation:**

All work should be carried out in such a manner 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 Protection: Prevent all contact with skin. When handling wet concrete personnel should wear loose comfortable clothing, impervious boots, gloves (standard duty leather or equivalent AS 2161). Wash work clothes regularly.

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 to 13). Strong alkalines, like strong acids, are harmful 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 it 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.

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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 minimize dust generation and dust exposure. 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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------------|--|
| Appearance: | A mouldable generally grey mixture which will set and harden to become solid |
| Odour: | Some admixture in concrete may create a smell of ammonia. |
| pH, at stated concentration: | >7.0 |
| Vapour pressure: | Not applicable |
| Vapour Density: | Not applicable |
| Boiling Point/range: (°C): | Not applicable |
| Freezing/Melting Point: (°C): | Not applicable |
| Solubility in water: | Insoluble, Reacts with water forming an alkaline solution. |
| Specific gravity: | (H₂O = 1) 2.5 |
| Evaporation Rate: | Not applicable |
| Flammability Limits: | Not applicable |
| Flash Point: | Not applicable |
| Explosive Properties: | Not flammable |
| Particle Size: | A proportion 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: | Stable |
| Incompatible Materials: | None |
| Conditions to avoid: | Keep away from water |
| Hazardous Decomposition products: | None |
| Hazardous Polymerisation: | None |

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

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SECTION 11: TOXICOLOGY INFORMATION**Health Effects****Acute (short term):**

Swallowed: Unlikely under normal industrial use. Mildly abrasive to mouth and throat if swallowed.

Eye: Plastic concrete will 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 irritate the eyes resulting redness, stinging and lachrymation. Exposure to dust may aggravate pre-existing eye conditions.

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 to 13). Strong alkalines, like strong acids, are harmful 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 it 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 and may cause coughing and sneezing.

Chronic (long term):

Eyes: Dust may cause irritation and inflammation of the eyes and aggravate pre-existing eye conditions.

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. Over time this may become chronic and can also become infected.

Inhaled: Plastic concrete is not considered a chronic inhalation hazard.

Repeated exposure to the fine 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. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated. The product contains a proportion of respirable free crystalline silica in the quartz component. 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 autoimmune disorders.

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Inhalation of dust, including crystalline silica dust, is considered by medical authorities to increase the risk of lung disease due to tobacco smoking. 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 the research on this is inconclusive and ASCC/NOHSC has not classified crystalline silica as a carcinogen. Current research indicates no excess risk of lung cancer or other cancers from using these products.

SECTION 12: ECOLOGICAL INFORMATION**Concrete:**

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: Plastic concrete, recover spilled materials by shovelling into containers and using mechanical sweeper, but avoid generating dust. Prevent spillage or wash down water from entering sewer drains, stormwater and water courses.

Dust (cement or Fly Ash) is best cleaned up by vacuum device to avoid making dust airborne. Wetting down before sweeping up dust may be a useful control measure.

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

Wear sufficient respiratory protection. Dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container for reuse.

May be disposed in local landfill.

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SECTION 14: TRANSPORT INFORMATION

UN number: None Allocated
Class: None Allocated
Subsidiary Risk 1: None Allocated
Packaging Group: None Allocated
Hazchem code: None Allocated
DG Class: None Allocated
EPG: None
Incompatibilities: None
Proper Shipping Name: None allocated
Marine Pollutant: No

SECTION 15: REGULATORY INFORMATION

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

Poisons Schedule: Not Scheduled

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 to respirable crystalline silica dust 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).

Poisons Information Centre: 13 11 26

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).

SECTION 16: OTHER INFORMATION

Emergency Contact No: 0412 289 039

Contact For further information contact Nucon Office on 07 5573 8000.

Issue Date: 23/03/2017

We believe that the information given herein is accurate and given in good faith, but no warranty expressed or implied is made. Where the information provided herein discloses a potential hazard or hazardous ingredient, adequate warning should be provided to employees and users and appropriate precautions taken when using the product.