



Material Safety Data Sheet

For

Ready Mixed Concrete

plastic concrete, concrete slurry, concrete bleed water, wet concrete

PHYSICAL DESCRIPTION / PROPERTIES

Ready mixed concrete is a plastic mixture of water, cementitious materials (typically Portland cement) and aggregates. The latter is usually sand and stone or gravel. Typically it includes various admixtures used to enhance the concrete performance characteristics.

It may also include low proportions of:

Fly ash
Ground Granulated blast Furnace Slag
Condensed Amorphous Silica Fume
Micro Silica
Metallic oxide Pigments
Lignosulphonate solution
Sulphonate solution
Naphthalene sulphonate
Polycarboxylate solution
Steel fibres
Polypropylene fibres

Note: Portland Cement is alkaline in nature so mixes of wet concrete are highly alkaline in nature with pH of 12 – 13. Strong alkalis like strong acids are harmful or caustic to skin and eyes.

Cements may contain 0.1% - 0.35% crystalline silica depending on the proportion and crystalline silica content of the ingredients. All ingredients may contain crystalline silica.

Boiling Point/Melting Point	Not applicable
Vapour Pressure	Not applicable
Percent Volatiles	Not applicable
Specific gravity	2.2 – 2.6
Flash Point	Not applicable
Flammability Limits	Not applicable
Auto Ignition temp	Not applicable
Solubility in water	Not applicable
Respirable fraction	Not applicable

Health Hazard Information

- Acute:** Contact with unhardened concrete and bleed water can produce severe skin burns, development of pain symptoms may be delayed several hours. Irritation of both eyes and tissue lining of the nose can be severe. Prolonged contact can cause severe alkali burns. Hypersensitive individuals may develop an allergic type of dermatitis. (cement in concrete may contain chromium) Pre existing skins conditions may be worsened.
- Chronic:** Dermatitis can result from continued contact of unprotected skin with unhardened concrete. Plastic concrete is not considered to be a chronic inhalation hazard; however repeated inhalation of dry concrete dust may result in silicosis. Excessive amounts of concrete dust may be generated when hardened concrete products are cut, drilled, sawed, routed, chased, sanded, broken or ground.

Emergency and First Aid Procedures

- Swallowed:** Wash mouth and lips with water. DO NOT INDUCE VOMITING. Give water containing 1% sugar to drink. Get prompt medical attention.
- Eyes:** Irrigate copiously with low pressure water for at least 15 minutes. Seek medical attention.
- Skin:** Wash with tepid soapy water. A shower may be required. After washing use a moisturiser while skin is still wet. If clothing has come in contact with wet cement based products it should be removed and washed before it is worn again.

Precautions for Use

Respiratory protection:

Respiratory protection should not be necessary when handling unhardened concrete. However a Worksafe approved dust respirator is recommended when handling dry cement or when cutting or otherwise abrading hardened concrete.

- Ventilation:** Local ventilation should not be necessary when handling unhardened concrete however local ventilation may be necessary to control dust levels when handling dry cement or generated from cutting or abrading hardened concrete.

Hand Protection:

Select chemical and abrasion resistant gloves or use a barrier cream to provide protection against skin contact with unhardened concrete and bleed water. Avoid contaminating the inside of the gloves with concrete or bleed water.

Eye Protection:

Use safety glasses or tight fitting goggles if dust is likely to be generated.

Other protective clothing or equipment:

Use impermeable boots, gloves, aprons and clothing that will protect all potentially exposed skin and prevent contact with unhardened concrete and bleed water. Immediately remove and/or rinse with fresh water clothing that has become wetted or saturated by unhardened concrete or bleed water. Contaminated clothing that remains in contact with the skin can cause burns.

Work Practices

Wash hands frequently during the workday with fresh water and pH neutral soap. Immediately after working with unhardened concrete workers should shower with fresh water and pH neutral soap. Avoid placing hands in the water used to clean tools. Concrete residue causes the water to become highly alkaline. Precautions must be observed because the alkaline cement in concrete can cause severe burns without warning. Little heat is sensed.