

Safety Data Sheet Portland Cement and Blends

1. Identification

Product Name: Portland Cement

Other Name(s): RapidCem - High Early Strength Cement Type HE
Ultracem - Holcim Portland Cement Type GP
Class G Cement
White Cement
Pavecem
Tilecem
Drillwell Plus MS

Proper Shipping Name: Not applicable

UN Number: Not applicable

Recommended Use: Cement for the production of concrete, mortar and paste.

Supplier:

Name: Holcim (New Zealand) Ltd

Phone: 03 339 7500

Address: Head Office
1/1 Show Place
PO Box 6040
Christchurch

Fax: 03 339 7499
Email: info-nz@larfageholcim.co.nz
Website: www.holcim.co.nz

Emergency Contacts: Emergency Services (Fire, Ambulance, Police) – Dial 111
National Poisons Information Centre - 0800 764 766 (0800 POISON)

2. Hazard Identification

Statement of Hazardous Nature:

Classified as hazardous according to criteria in the EPA Hazardous Substances (Minimum Degrees of Hazard) Notice 2017.

Hazard Classification:

6.1D, 6.5A, 6.5B, 8.2C, 8.3A

Danger



Hazard Statements:

Causes severe skin burns and eye damage
Harmful if swallowed
Harmful if inhaled
May cause an allergic skin reaction
May cause allergy or asthma symptoms or breathing difficulties if inhaled

Prevention Statements:

Keep out of reach of children

Do not breathe dust
Wash hands / exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/clothing and eye/face protection.
In case of inadequate ventilation wear respiratory (particulate) protection.

Group Standard: Construction Products (Corrosive 8.2C) Group Standard 2017

3. Composition & Information on Ingredients

Ingredient	CAS Number	Concentration (%)			
		Ultracem Rapidcem White Cement Class G Cement	Pavecem	Tilecem	Drillwell Plus MS
Portland Cement	65997-15-1	60-100%	60%	>60%	>65%
Fly Ash	-	-	-	20%	-
Calcium Oxide (Lime)	1305-78-8	-	40%	-	-
Silica Fumes	69012-64-2	-	-	-	13 – 15%

Portland Cement Includes

Calcium Carbonate (Limestone)	13397-26-7	<10%	<10%	<10%	<10%
Calcium Sulphate (Gypsum)	13397-24-5	5%	5%	5%	5%
Silica (quartz)*	14808-60-7	18-22%	18-22%	18-22%	18-22%
*Crystalline Silica		<0.05%	<0.05%	<0.05%	<0.05%

4. First Aid Measures

New Zealand Poisons & Hazardous Chemicals National
Information Centre
phone 0800 POISON – 0800 764 766

Inhalation: IF INHALED remove to fresh air and keep at rest in a position comfortable for breathing.

If experiencing respiratory symptoms call a POISON CENTRE or doctor/physician.

Skin: IF ON SKIN (or hair) remove/take off immediately all contaminated clothing, rinse skin with water/shower. Remove/take off immediately all contaminated clothing.

Wash contaminated clothing before re-use

If skin irritation or rash occurs get medical advice/attention.

Cement burns with little warning - little heat is sensed.

Eyes: IF IN EYES rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician

Ingestion: IF SWALLOWED rinse mouth, do NOT induce vomiting. Immediately call a POISON CENTRE or doctor/physician

Advice to Doctor: Treat symptomatically. Wet cement is corrosive to skin or eye tissue and may cause caustic type burns.

5. Fire Fighting Measures

Flammability: Non-combustible, non-explosive

Extinguishing media: Appropriate for surrounding materials. Prevent contamination of drains or water ways.

Combustion products: May evolve toxic gases if strongly heated

Flash point: Not applicable

Flammability limits: Not applicable

Auto-ignition temperature: Not applicable

HAZCHEM Code: Not available

6. Accidental Release Measures

Protect yourself and others from harm. Wear appropriate protective equipment (see section 8)

Spills: Use dry clean up methods that do not disperse dust into the air such as gentle sweeping or an industrial vacuum cleaner with filters suitable for this product. Avoid inhalation of dust and contact with skin.

Do not use water for cleaning bulk material as this will cause cement to set. Prevent spill from entering drain or waterways. Contain spillage, collect and place in suitable containers for reuse or disposal. If water is used to clean up residual material ensure the water is recovered and neutralised before disposal.

If product is spilt into a waterway notify the Regional Council.

7. Handling & Storage

Safe Handling

The material should be kept free from moisture until used.

Do not breathe dust. Avoid eye and skin contact. Do not allow wet cement to remain in contact with skin.

Wash hands / exposed skin thoroughly after handling. Immediately after working with cement or cement-containing materials, workers should shower with soap and water.

Promptly remove dusty clothing or clothing which is wet with cement or associated liquid and launder before reuse.

Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area

Storage

Store locked up in cool dry well ventilated area.
Keep dry and store off the ground.

8. Exposure Controls & Personal Protection

Exposure Standards

Workplace Exposure Standards (WES):

Workplace Exposure Standards and Biological Exposure Indices 9th Edition, Nov 2017

Portland Cement WES-TWA 10 mg.m⁻³

Tolerable Exposure Limit (TEL): Not set

Engineering Controls

Ventilation: Use only outdoors or in a well-ventilated area

An exhaust fan ducted from near point of dust generation can be used to control airborne dust levels. When handling large amounts a dust collection system should be considered. Dust levels and any other discharge of dust should comply with Health and Safety rules, Resource Consents and any relevant District or Regional rules.

PPE

Precautions must be taken. Cement burns with little warning - little heat is sensed on the skin during this process. Do not kneel in wet cement.

Wear protective gloves/clothing and eye/face protection.

In case of inadequate ventilation wear respiratory (particulate) protection

Respiratory: In dusty environments, the use of an approved Class P1 particulate disposable respirator (not a nuisance dust mask) is recommended. At high dust levels greater protection may be required. Respiratory protection must comply with AS/NZS 1715 and 1716.

Eyes/Face: Use tight fitting goggles or protective eyewear in dusty environments. Eye protection must comply with AS/NZS 1337.

Skin: Use barrier creams, impervious, abrasion and alkali resistant gloves, boots and protective clothing to protect the skin from prolonged contact with wet cement in plastic concrete, mortar or slurries.

Contaminated work clothing should not be allowed out of the workplace

9. Physical & Chemical Properties

Appearance: Grey or white powder

Odour: No odour

pH: alkaline, approx. 12

Vapour pressure: not applicable

Vapour density: not applicable

Boiling point: not applicable

Freezing point: not applicable

Melting point: ~1350°C

Solubility (water): Slight (0.1 – 1.0%)

Specific gravity: (H₂O=1) 2.93 – 3.09

Flash point: Not applicable

Evaporation rate: Not applicable

10. Stability & Reactivity

Stability: Product is stable. Keep dry until used.

Conditions to avoid: Unintended contact with water.

Incompatibility / Materials to avoid: Incompatible with oxidising agents (e.g. hypochlorites), ethanol, acids. Aluminium powder and other alkali and alkaline

earth elements will react in wet mortar or concrete, liberating hydrogen gas.

Hazardous decomposition products: May evolve toxic gases if heated to decomposition.

Hazardous polymerisation: Does not occur

11. Toxicological Information

Health Effects / Symptoms of Exposure

Inhalation: Inhalation of dust can cause irritation and inflammation of the upper respiratory system. Potential respiratory sensitiser (causing an increased response at decreased exposure levels).

Skin: Contact with powder may result in rash or dermatitis. Wet cement, especially as an ingredient in plastic (unhardened) concrete, mortar or slurries, can dry the skin and cause caustic burns. Potential dermal sensitiser.

Eyes: Corrosive – irritant. Direct contact with the eyes can cause irritation, lacrimation (formation of tears), inflammation or burns of the cornea and possible permanent damage.

Ingestion: Ingestion may result in burns to the mouth and throat, nausea, vomiting and abdominal pain.

Other Effects: Cement may contain trace [less than 0.05%] amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals. Cement may contain trace amounts of silica [less than 0.05%] which if at respirable size may be harmful to the respiratory system with an increased risk of silicosis if the exposure level is high or for long periods of time. At trace levels, the criteria for classification as a carcinogenic product is not met and Portland Cement is not classified as a carcinogen under the HSNO classification system.

Toxicological Data

There is no data available to indicate that Portland cement is mutagenic, carcinogenic or a reproductive toxin.

12. Ecological Information

Avoid release to the environment. Do not allow to enter drains or waterways.

Environmental Exposure Limit (EEL): None set

Persistence in environment: Not available

Biodegradability: Not available

Mobility: Not available

Ecotoxicological Data*

The product forms an alkaline slurry when mixed with water which may affect the pH of aquatic systems if contact occurs in large quantities. Once set, product is persistent and has low degradability.

Calcium hydroxide	LC50 (96hr) :	33.9mg/L (Clarias gariepinus (Zambezi barbel) [Fish]
(forms from reaction of	Bioaccumulative :	No
calcium oxide with water)	Rapidly degradable :	Yes

* Unless otherwise specified, data source: EPA Chemical Classification Information Database (CCID).

13. Disposal Considerations

Small amounts of material can be disposed of as common waste or returned to the container for later use if it is not contaminated. Large amounts may require special handling.

Material should be kept out of storm water and sewer drains. Any discharge during cleanup should comply with Resource Consent requirements and any relevant District or Regional Council rules.

Containers: Unless thoroughly cleaned, empty containers/packaging should be disposed of as hazardous waste.

14. Transport Information

Not classified as a Dangerous Good according to NZS 5433:2012, IMDG or IATA

Proper Shipping Name: Not applicable

UN Number: Not applicable

DG Class: Not applicable

Packing Group: Not applicable

15. Regulatory Information

HSNO Approval

Approval Code: HSR002542

HSNO Group Standard: Construction Products (Corrosive 8.2C) Group Standard 2017

Health and Safety at Work (Hazardous Substances) Regulations

Location Certification: Not required

Tracking: Not required

Certified Handlers: Not Required

Secondary containment: Not required (solid)

Refer to the following for full details

- Construction Products (Corrosive 8.2C) Group Standard 2017 (available at www.epa.govt.nz)

- Health and Safety at Work (Hazardous Substances) Regulations (available at <http://www.legislation.govt.nz>)

16. Other Information

Hazard Classifications

6.1D - Substances that are harmful if swallowed / inhaled

6.5A - Substances that are Respiratory sensitisers

6.5B - Substances that are Skin sensitisers

8.2C - Substances that are Corrosive to skin

8.3A - Substances that are Corrosive to eyes

Abbreviations / Terminology:

AS/NZS 1337 Personal eye-protection

AS/NZS Joint Australian New Zealand Standard

CAS# Chemical Abstract Service number (a unique identifier for chemicals)

CCID Chemical Classification Information Database

HSNO (New Zealand) Hazardous Substances and New Organisms Act

HSW-HS Health and Safety at Work Act – Hazardous Substances Regulations

LD50, LC50, EC50 Lethal dose / Lethal concentration / Effective concentration – Dose or concentration required to produce the specified effect in 50% of the sample studied.

Prepared with reference to: *Hazardous Substances (Safety Data Sheets) Notice 2017*.

mg.m⁻³ milligrams per cubic metre

NZIoC New Zealand Inventory of Chemicals

NZS 5433 Transport of Dangerous Goods on Land

TEL Tolerable Exposure Limit

WES Workplace Exposure Standard

WES-TWA Workplace Exposure Standard – Time Weighted Average

Revision Information:

SDS may be revised from time to time, please ensure you have a current copy.

This revision dated 22 August 2018.

Previous version dated 17 May 2018

Changes in this revision: 1) Section 1 – Additional blends added
2) Section 3 - Change in composition data to reflect additional blends

Note:

This safety data sheet attempts to describe as accurately as possible the potential exposures associated with normal use of the product described herein. Health and safety precautions in the data sheet may not be adequate for all individuals and/or situations. Users have the responsibility to evaluate and use this product safely and to comply with all applicable laws and regulations.

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