



## PORTLAND & BLENDED CEMENTS

### SECTION 1: MATERIAL AND SUPPLIER INFORMATION

Product Name:	Portland & Blended Cements
Applicable In:	Australia
Other Names:	Type GP, GB, HE, LH, SR, SL Cements, Steel Cement <sup>®</sup> , Eureka Cement <sup>®</sup>
Recommended Use:	Portland & Blended cements may be used as binders in concrete, concrete masonry, mortar and grouts. They may also be used in the manufacture of fibre cement products, in soil stabilization in construction and civil engineering projects.
Company Details:	Independent Cement & Lime Pty Ltd 750 Lorimer Street Port Melbourne, Vic 3207 ABN 49 005 829 550
Telephone:	VIC 03 9676 0000
Facsimile:	VIC 03 9646 4954

This Material Safety Data Sheet (MSDS) is issued by Independent Cement & Lime Pty Ltd in accordance with the Code and guidelines from the Australian Safety and Compensation Council (ASCC, formerly National Occupational Health and Safety Commission – NOHSC). The information in it must not be altered, deleted or added to. Independent Cement & Lime Pty Ltd will not accept any responsibility for any changes made to its MSDS by any other person or organisation. Independent Cement & Lime Pty Ltd will issue a new MSDS when there is a change in product specifications and/ or ASCC standards, guidelines or regulations.

### SECTION 2: HAZARDS IDENTIFICATION

**Statement Of Hazardous Nature:** This product is classified as Hazardous according to the criteria of the Australian Safety and Compensation Council ASCC (formerly NOHSC) approved criteria for classifying Hazardous Substances (NOHSC:1008) 3<sup>rd</sup> Edition. Non-dangerous Goods

#### Risk Phrases:

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.  
R36/37/38: Irritating to the eyes, respiratory system and skin.  
R43: May cause sensitisation by skin contact.  
R66: Repeated exposure may cause skin dryness or cracking  
R48/20: Danger of serious damage to health by prolonged exposure through inhalation

#### Safety Phrases:

S22: Do not breathe dust.  
S24/25: Avoid contact with skin and eyes.  
S29: Do not empty into drains.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection  
S38: In case of insufficient ventilation, wear suitable respiratory equipment.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Proportion	CAS Number
Portland Cement (Clinker)	<97%	65997-15-1
Slag (where applicable)	0-80%	65999-69-2
CaSO <sub>4</sub> 2H <sub>2</sub> O (Gypsum)	3-8%	10101-41-4
Ca CO <sub>3</sub> (Limestone)	0-5%	1317-65-3
Ca(OH) <sub>2</sub> (Lime)(where applicable)	0-50%	1305-62-0
Fly Ash (where applicable)	0-50%	69131-74-8
Crystalline Silica (Quartz)	<1%	14808-60-7
Hexavalent Chromium (Cr VI)	< 10 ppm	1333-82-0

## SECTION 4: FIRST AID MEASURES

**Swallowed:** Rinse mouth and lips with water. Do not induce vomiting. Give water to drink. If symptoms persist, seek medical attention.

**Eyes:** Flush thoroughly with flowing water, while holding eyelids open, for 15 minutes to remove all traces. Do not attempt to remove solid particles embedded in the eye. If symptoms such as irritation, pain or redness persist, seek medical attention.

**Skin:** Remove heavily contaminated clothing immediately. 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 to fresh air, away from dusty area. If symptoms persist, seek medical attention.

**Advice to Doctor:** Treat symptomatically.

## SECTION 5: FIRE FIGHTING MEASURES

**Flammability:** Not flammable. Does not cause dust explosions.

**Suitable extinguishing media:** Not applicable.

**Hazards from combustion products:** None.

**Special protective precautions and equipment for fire fighters:** None.

**Hazchem Code:** None Allocated

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Spills:** Spills are best cleaned up by a vacuum device to avoid generating airborne dust. Recommendations on Exposure Controls/ Personal Protection (see following sections) should be followed during spill clean-up. Keep product out of storm water.

## SECTION 7: HANDLING AND STORAGE

**Handling:** When supplied in bags, handling should be in accordance with Manual handling regulations.

**Storage:** Avoid breathing dust. Protect from moisture to prevent hardening.

**Incompatibilities:** None

**Transport:** Transportation is by rail, road or ship – in bag or bulk form.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Standards:

National Occupation 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): 0.1mg/m<sup>3</sup> TWA (time-weighted average) as respirable dust. (< 7 microns particle equivalent aerodynamic diameter).

Total dust (of any type, or particle size): 10mg/m<sup>3</sup> TWA as inspirable dust.

However, where a State or Territory prescribes a lower exposure standard, the lower exposure standard applies.

Chromium VI (hexavalent): 0.05mg/m<sup>3</sup> – Sensitiser.

### Engineering Controls:

Keep exposure to dust as low as practicable, with the aim of maintaining respirable crystalline silica dust levels to below 0.05mg/m<sup>3</sup> TWA (time-weighted average). Working in the open air and external openings (such as doors and windows in buildings) generally provides adequate ventilation. Local mechanical ventilation or local dust extraction may be used, if necessary, to control airborne dust levels. If generated dust cannot be avoided follow personal protection recommendations. Where possible vacuum or wash down all gear, equipment or mobile plant prior to maintenance and repair work. If compressed air cleaning cannot be avoided, wear eye and respiratory protection, and clothing as listed below.

For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow personal protection instructions if no local exhaust ventilation is available.

Avoid repeated skin contact with dry and wet product.

### Personal Protection:

#### Skin Protection:

Minimise contact when handling dry or wet product.

Wear loose comfortable clothing, impervious footwear and gloves (standard duty leather or equivalent AS 2161).

Wash work clothes regularly. To avoid ingestion, wash hands before eating or smoking.

#### Eye Protection:

Safety glasses with side shields or safety goggles (AS/NZ 1336) or face shield should be worn.

#### Respiratory Protection:

None required if engineering and handling controls are adequate. Where engineering and handling controls are not adequate to minimize exposure to total dust and to respirable crystalline silica, personal respiratory protection may be required.

The type of respiratory protection required is dependent 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, where high levels of dust are encountered, more efficient cartridge-type powered respirators or supplied-air helmets may be necessary.

Use only respirators that bear the Australian Standards mark and are fitted and maintained correctly.

Note that persons with facial hair will have difficulty in obtaining a satisfactory face seal. For alternatives see AS/NZS 1715: Selection and use of respirator protective devices.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Fine powder, light grey in colour.
Odour:	None
Particle Size:	20-40% of particles may be <10 um (i.e.) in the respirable range.
pH at stated concentration:	Approximately 12
Vapour Pressure:	Not Applicable
Boiling Point / Melting Point:	MP>1200°C
Solubility in water:	Slight – hardens on mixing with water.
Specific Gravity:	2.8 – 3.2
Flammability Limits:	Not Applicable
Flash Point:	Not Applicable
Explosive Properties:	None
Specification:	Portland & Blended Cements are manufactured to comply with all applicable requirements of AS 3972.

## SECTION 10: STABILITY AND REACTIVITY

Portland and Blended cements are stable substances compatible with most other building materials.

Chemical Stability:	Chemically Stable
Incompatible Materials:	None
Conditions to Avoid:	Keep free of moisture during storage
Hazardous Decomposition Products:	None
Hazardous Reactions:	None

## SECTION 11: TOXICOLOGICAL INFORMATION

### Health Effects

#### Acute (short term) Exposure

Swallowed:	Unlikely under normal industrial use. Mildly abrasive and corrosive to mouth and throat if swallowed. May cause nausea, stomach cramps and constipation.
Eyes:	Irritating and corrosive to the eyes and may cause alkaline burns. Dust is irritating to the eyes. Exposure to dust may aggravate pre-existing eye conditions and may cause chemical conjunctivitis, redness and watering of eyes with damage to cornea.
Skin:	Dust is irritating and drying to the skin. May cause alkaline burns, irritation or allergic dermatitis, especially as wet concrete, mortar or a slurry. Water soluble hexavalent chromium may sensitise individuals.
Inhaled:	Dust is mildly irritating to the nose, throat and respiratory tract and may cause coughing and sneezing.

#### Chronic (long term) Exposure- (Effects may occur after repeated or prolonged exposure)

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

**Skin:** Repeated contact may cause drying of the skin and can result in skin rash (dermatitis) typically affecting the hands. Over time this may become chronic and can also become infected. Persons who are allergic to chromium may develop an allergic dermatitis which aggravates the irritant effects which can lead to chronic cement dermatitis.

**Inhaled:** 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. Pre-existing upper respiratory and lung diseases including asthma and bronchitis may be aggravated.

The product contains a proportion of respirable free crystalline silica. 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 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.

Crystalline silica (inhaled in the form of quartz or cristobalite from occupation sources) has been classified by The International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1). However (in view of CCAA) the research on this is inconclusive and ASCC/NOHSC had not classified crystalline silica as a carcinogen.

Current research indicates there is no excess risk of lung cancer or other cancers from using these products.

Studies have shown that **smoking** increases the risk of bronchitis, silicosis and lung cancer in persons exposed to crystalline silica.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** Product forms an alkaline slurry when mixed with water.

**Persistence and Degradability:** Persistent with low degradability.

**Mobility:** Low mobility would be expected in a landfill situation.

## SECTION 13: DISPOSAL CONSIDERATIONS

Portland & Blended cements can be treated as a common waste for disposal or dumped into a landfill site in accordance with local authority guidelines. Recycling into other construction products is usually a practicable alternative.

Keep out of sewer and storm water drains.

Measures should be taken to prevent dust generation during disposal and exposure and personal precautions should be observed (see section on Exposure Controls / Personal Protection).

## SECTION 14: TRANSPORT INFORMATION

Transportation is done in bulk or bag form by ship, rail or road.

**UN Number:** None Allocated

**Class – Subsidiary Risk:** None Allocated

**Packaging Group:** None Allocated

**Proper Shipping Name:** None Allocated

**Hazchem Code:** None Allocated

**Incompatibilities:** None

## SECTION 15:

## REGULATORY INFORMATION

Poisons Schedule: Not scheduled

Classified as **HAZARDOUS** according to the Australian Safety and Compensation Council (ASCC (formerly NOHSC) Approved Criteria for Classifying Hazardous Substances (NOHSC:1008) 3<sup>rd</sup> Edition.

Portland & Blended cements are classified as non-Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

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).

## SECTION 16:

## OTHER INFORMATION

For further information on this product, contact:

Telephone: 03 9676 0000

Website: [www.independentcement.com.au](http://www.independentcement.com.au)

Emergency Contact Number: 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 glove).

National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSCH:2011 (2003)], April 2003, National Occupational Health and Safety Commission.

---

### Advice Note:

The information in this document is believed to be accurate. Please check the currency of this MSDS by contacting: (03) 9676 0000

The provision of this information should not be construed as a recommendation to use this product in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Users should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace and in conjunction with other substances or products.

*Eureka Cement and Steel Cement are registered Trademarks of Independent Cement & Lime Pty Ltd.*