

April 2003

	<b>BLUE CIRCLE SOUTHERN</b>	<b>MATERIAL SAFETY DATA SHEET</b>	
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*"Hazardous according to criteria of Worksafe Australia"*

<b>COMPANY DETAILS</b>	UN Number: None Allocated Dangerous Goods Class & Sub-risk: None Allocated Hazchem Code: None Allocated Emerg. Guide: Packaging Method: None Allocated Poison Schedule: None Allocated
<b>Company:</b> Blue Circle Southern Cement ACN 008 528 523 <b>Address:</b> Clunies Ross Street, Propect NSW 2148 <b>Telephone Number:</b> (02) 9033 4000 <b>Emergency Only Number:</b> 1800 033 111	

**I. PRODUCT IDENTIFICATION**

<b>Product Name:</b> GENERAL PURPOSE CEMENT, SHRINKAGE LIMITED CEMENT, HIGH EARLY STRENGTH CEMENT, OFF WHITE CEMENT, BUILDERS PREMIER CEMENT, WINTERMENT
<b>Other Names:</b> Type GP, Type SL, Type HE
<b>Use:</b> Used as hydraulic binders and cementitious materials in the construction industry.

**PHYSICAL DESCRIPTION/PROPERTIES**

<b>Appearance:</b>	Off white to dark grey fine powder.
<b>Boiling/Melting Point (°C):</b>	Gypsum starts to dehydrate at 128°C. Melting point >1200°C.
<b>Specific Gravity:</b>	2.9 – 3.2
<b>Autoignition Temp. (°C):</b>	N/A
<b>Solubility in Water:</b>	< 10 gms/litre
<b>Solution pH:</b>	11 – 13
<b>Bulk Density:</b>	1100 – 1550 kg/m <sup>3</sup>

INGREDIENTS	CAS NO.	PROPORTION
Portland Cement Chemicals	65997 – 15 – 1	> 60
Gypsum	13397 – 24 – 5	< 5
Granulated Blast Furnace Slag	65997 – 69 – 2	< 5
Flyash	68131 – 74 – 8	< 5
Limestone	1317 – 65 – 3	< 5
Crystalline Silica	14808 – 60 – 7	< 1

**\*NOTE:** Crystalline silica is an impurity, the amount depending on the crystalline silica content of raw materials.

## II. HEALTH HAZARD INFORMATION

### HEALTH EFFECTS

#### (A) SHORT TERM (ACUTE) EXPOSURE:

**Swallowed:** Alkaline corrosive to mouth and throat. May cause burning sensation and abdominal discomfort.

**Eyes:** Irritating and corrosive to eyes. May cause chemical conjunctivitis and redness and watering of eyes with damage to cornea.

**Skin:** It will dry the skin and may cause alkali burns and irritant contact dermatitis, especially as an ingredient in plastic (unhardened) wet concrete mortar and slurry. Due to trace amounts of hexavalent chrome ( $Cr^{6+}$ ), wet cement may cause chromium sensitisation and allergic contact dermatitis to some individuals.

**Inhaled:** Irritating to nose, throat and respiratory system causing coughing and sneezing.

#### (B) LONG TERM (CHRONIC) EXPOSURE:

**Inhaled:** Repeated inhalation of dust containing crystalline silica can cause bronchitis, silicosis (scarring of the lung) and lung cancer. It may also increase the risk of scleroderma (a disease affecting the connective tissue of the skin, joints, blood vessels and internal organs).

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

Small quantities of crystalline silica may be present in this product as a result of impurities in its ingredients. Crystalline silica is present in greater quantities in concrete by reason of the addition of sand and aggregate. Crystalline silica dust derived from the use of this product could be inadvertently inhaled during the dry cutting of concrete.

**Skin:** Repeated skin contact with cement in wet concrete, mortars and slurries has been associated with both irritant dermatitis and allergic (contact) dermatitis. The latter is due to the presence of traces of water soluble hexavalent chromium in cement.

### FIRST AID

**Swallowed:** Wash mouth and lips with water. Do not induce vomiting. Give water or milk to dilute stomach contents. Seek medical attention, if symptoms persist.

**Eyes:** Irrigate with copious quantities of clean water or saline solution for at least 15 minutes. Seek medical attention if discomfort persists. Continue irrigating the eyes with clean water or saline solution while transporting to medical facility.

**Skin:** Remove dusty clothing. Wash skin with tepid soapy water; shower if required. Apply skin moisturiser.

**Inhaled:** Move immediately to fresh air. Seek medical attention, if symptoms persist.

#### First Aid Facilities:

Eye wash station.

### ADVICE TO DOCTOR

Treat as for moderate to strong alkali.  
Treat symptomatically.  
Contact a Poisons Information Centre.

### III. PRECAUTIONS FOR USE

#### EXPOSURE STANDARDS – WORKSAFE AUSTRALIA

This product is classified with an exposure standard of:

Dust (NOS-not otherwise specified): 10 mg/m<sup>3</sup> TWA (time-weighted average) as inspirable dust.

Crystalline silica (quartz): 0.2 mg/m<sup>3</sup> TWA as respirable dust .

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

Refer to **Other Information** in **Section IV, SAFE HANDLING INFORMATION.**

#### MANUFACTURERS' RECOMMENDATIONS

Keep exposure to dust as low as practical.

If inspirable dust levels are kept below 2 mg/m<sup>3</sup>, health problems such as skin, eye and respiratory irritation may be minimised.

Respirable crystalline silica (quartz) exposure levels should be kept below the recommended action level of 0.1 mg/m<sup>3</sup>.

Avoid repeated skin contact with wet concrete and dry and wet cement.

#### ENGINEERING CONTROLS

Avoid generating dust. All work with cement should be carried out in such a way as to minimise exposure to dust and repeated skin contact. Use local mechanical ventilation or extraction in areas where dust, generated whilst handling cement, could escape into the enclosed work environment.

For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow safe manual handling practices. Work areas should be cleaned regularly by wet sweeping or vacuuming. If generating dust cannot be avoided, see personal protection recommendations below.

#### PERSONAL PROTECTION

Always wear suitable protective clothing and use respiratory equipment.

**Skin:** Use impervious elbow length gloves (AS 2161), such as PVC, impervious boots and full-length clothing to protect the skin from contact with the dust, particularly wetted dust or wet cement. After working with this product, workers are advised to shower with soap and water and apply a skin moisturiser. Work clothes should be washed regularly.

**Eyes:** Safety spectacles with side shields or safety goggles (dust resistant AS/NZ 1336) should be worn if dust is likely to be generated.

**Respiratory:** If dust is generated wear a class P1 or P2 particulate respirator (AS/NZS 1715 & 1716). Use only respirators which comply with Australian Standards and are fitted correctly. Note that persons with facial hair will have difficulty in obtaining a satisfactory face seal. For alternatives see AS/NZS 1715: *Selection and uses of respiratory protective devices*.

Please refer to the Worksafe Information Booklet "Cement Dermatitis".

Persons with a history of respiratory illness or reduced pulmonary function should avoid places with high dust levels. When cutting or abrading the hardened material manufactured from or with cement, keep it wetted with water to avoid creating hazardous dust. Do not breathe this dust as it may contain various quantities of crystalline silica.

#### FLAMMABILITY

This product is non-flammable. Does not support combustion of other material.

## IV. SAFE HANDLING INFORMATION

### STORAGE AND TRANSPORT

The product should be stored and transported in a manner to prevent ingress of water and emission of dust.

### SPILLS AND DISPOSAL

**Spills:** Spills may be vacuumed or swept. Avoid generation of dust.  
Collect spilled material and seal in clean, dry, labelled containers for disposal.  
Clean-up personnel should follow the precautions outlined in **Section III, Precautions For Use.**

**Disposal:** This product should be disposed of in accordance with requirements of local authorities.  
Keep out of sewer and stormwater drains.

### FIRE/EXPLOSION HAZARD

This product is non-flammable and does not cause dust explosions.

### OTHER INFORMATION

In June 1997, crystalline silica was evaluated by the International Agency for Research on Cancer (IARC): "Crystalline silica inhaled in the form of quartz or crystobalite from occupational sources is carcinogenic to humans (Group 1)".

**Smoking:** Cigarette smoking increases the risk of occupational respiratory diseases. It is recommended that all storage and work area should be smoke-free zones.

#### For information phone

<b>NSW:</b> (02)-9033-4056	<b>Title of Contact Person:</b>	Manager Technical Sales
<b>Victoria:</b> (03)-5241-8133	<b>Title of Contact Person:</b>	Manager Technical Sales
<b>Issue Date:</b> April 2003	<b>Approved by:</b>	Manager Technical Sales

The information in this document is believed to be accurate. Please check the currency of this MSDS by contacting this Company.

The provision of this information should not be construed as a recommendation to use this product in violation of any patent right 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. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including conjunction with other products.