



Material Safety Data Sheet

BLAST FURNACE SLAG

STATEMENT OF HAZARDOUS NATURE

This product is classified as hazardous according to criteria of Worksafe Australia

BGC Cement
 77 Vulcan Road
 Canning Vale, Western Australia
 Telephone: (08) 9334 4555

Product Name	BUILDERS CHOICE® Blast Furnace Slag
Other Names	Slag; Granulated Blast Furnace Slag; Ground Granulated Blast Furnace Slag
Manufacturer's Product Code	BFS20
U.N. Number	None allocated
CAS Number	<i>See Physical Description below</i>
Dangerous Goods Class	None allocated
Hazchem Code	None allocated
Poisons Schedule	Not scheduled
Uses	Blast Furnace Slag is classified as a supplementary cementitious material and is used in the manufacture of blended and special cements.
PHYSICAL PROPERTIES	
Appearance	A fine, off-white powder.
Boiling Point / Melt Point	Approximately 1350°C.
Vapour Pressure	Not applicable
Per Cent Volatiles	Not applicable
Specific Gravity	2.8 to 3.1
Flash Point	Not applicable
Flammability/Combustibility	Non-flammable; Non-combustible
Autoignition Temperature	Not applicable

Other Properties	Not explosive. No odour. Hardens on mixing with water.
------------------	--

PHYSICAL DESCRIPTION

Physical characteristics of slag cements are that they are alkaline in nature. The pH of water solution (slurry) of cements can be as high as 13.5

COMPONENT	CAS NUMBER	PROPORTION (%)
Calcium Oxide	1305-78-8	30 – 50
Silica (SiO ₂), amorphous	7631-86-9	35 – 40
Aluminium Oxide (Al ₂ O ₃)	1344-28-1	5 – 15
Sulfur	7704-34-9	<5

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

Swallowed: Mild corrosive action.

Eye: Short-term exposure - irritating. Long-term exposure - irritating may cause inflammation of the cornea.

Skin: Short-term exposure - irritating. Long-term exposure - wet cement, especially as an ingredient in plastic (unhardened) concrete, mortar or slurry, is slightly caustic and can dry the skin. There are also trace amounts on water-soluble hexavalent chromium present in cement (0-20ppm) and in some individuals may cause allergic dermatitis.

Inhaled: Short-term exposure - irritating. Long-term exposure - repeated inhalation of slag dust containing crystalline silica can cause bronchitis or pneumoconiosis of the lungs. It is recommended that all storage and work areas should be smoke free zones. Inhalation of high levels of slag dust may result in severe inflammation of the small airways of the lung and asthma-like symptoms.

FIRST AID

Swallowed: Brush dry material from face and wash with copious amounts of clean water. Do not induce vomiting; give water containing sugar or milk to drink. Seek medical attention.

Skin: Wash thoroughly with clean running water and mild soap. A shower may be required.

Eyes: Immediately irrigate with copious amounts of clean running water for at least 15 minutes. Do not rub eyes. Seek medical attention.

Inhaled: Move to outside fresh air area, and seek medical attention if effects persist.

Advice to Doctor: Contact a poisons information centre. For Western Australia, telephone 13 11 26

PRECAUTIONS FOR USE

Exposure Limits: Worksafe Australia Exposure Standard: Crystalline Silica (Quartz): 0.2 mg/m³ TWA (time-weighted average) as respirable dust. Dust (NOS - not otherwise specified): 10 mg/m³ TWA as inspirable dust. However, where a state, territory or local authority prescribes a lower exposure standard, the lower standard applies.

Recommendations: Keep exposure to dust as low as practicable. Respirable crystalline silica levels should be kept below 0.1 mg/m³ TWA, and respirable dust below 5 mg/m³ TWA.

Engineering Controls: Avoid generating dust. When handling slag, use local mechanical ventilation or extraction in areas where dust could escape into the work environment. For bulk deliveries, closed pumping systems are recommended. For handling of individual bags, follow instructions below if no local exhaust ventilation is available. Work areas should be cleaned regularly by wet sweeping or vacuuming. If generating dust cannot be avoided, follow personal protection recommendations below.

Personal Protection:

Skin: - Wear loose comfortable clothing. Wash work clothes regularly. Apply barrier cream to hands or wear cotton or light duty leather gloves or equivalent (AS 2161).

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

Respiratory: - None required if engineering and handling controls are adequate. If dust is generated wear a suitable P1 or P2 particulate respirator (AS/NZS 1715). Use only respirators that bear the Australian Standards mark 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, use and maintenance of respiratory protective devices.

Ventilation: Refer to Engineering Controls

Flammability/Combustibility: Blast Furnace Slag is non-flammable and non-combustible.

SAFE HANDLING INFORMATION

Storage and Handling: Store in a dry place. Slag should be stored away from moisture, steam, acid or acid fumes, in containers that prevent ingress of moisture, as this will cause it to set and hardened in storage. Concrete or steel silos, FIBC's (bulker bags) lined with plastic, or plastic-lined paper sacks are the most usual forms of storage. Transportation is usually in bulk by means of pneumatic rail or road tankers, in FIBC's or in paper sacks on pallets.

Spills and Disposals: Spills may be cleaned up by any dry method such as broom, shovel or vacuum device, with care taken to minimise dust evolution into the worker environment. Clean up personnel should wear full cover clothing, gloves, boots, dust masks and goggles. Carefully dispose of excess product and packaging by collecting for disposal as a trade waste in accordance with local authority guidelines.

CONTACT POINT: BGC Cement (08) 9334 4555
BGC Cemtech (08) 9334 4548
77 Vulcan Road
Canning Vale
Western Australia

The information in this document is believed to be accurate at the date of publication. Please check the currency of this MSDS by contacting (08) 9334 4555.

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.

Issue Date: November 2004

Re-Confirmed: August 2009