

# Material Safety Data Sheet

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Infosafe No™ LPUZK Issue Date : December 2010 ISSUED by BSLNSW

Product Name : AIR COOLED BLAST FURNACE SLAG

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Chemical Product and Company Identification** Approval No: 830  
**Product Name** AIR COOLED BLAST FURNACE SLAG  
**Company Name** BLUESCOPE STEEL (AIS) PTY LTD (ABN 19 000 019 625)  
**Address** Five Islands Road Port Kembla  
NSW 2505 Australia  
**Emergency Tel.** 131126 Poison Info  
**Telephone/Fax Number** Tel: 02 4275 7522 (24/7 switch board)  
Fax: 02 4275 7159  
**Recommended Use** Air-cooled Blast Furnance Slag

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** NON-HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Safety Phrase(s)** S22 Do not breathe dust.  
S24/25 Avoid contact with skin and eyes.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Information on Composition** Bulk Fraction Quartz analysis by Fourier Transform Infrared (FTIR) Spectroscopy was performed on a sample of this product. The results showed Alpha quartz was not detected at the limit of detection <0.5% w/w. (Respirable fraction of dust was not analysed, as bulk quartz was not detected.)

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Calcium oxide	1305-78-8	30-60 %
	Silicon dioxide	7631-86-9	30-60 %
	Aluminium oxide	1344-28-1	10-<30 %
	Magnesium oxide	1309-48-4	<10 %
	Quartz	14808-60-7	<0.5 %
	Ingredients determined not to be hazardous		Balance

## 4. FIRST AID MEASURES

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. If symptoms develop seek medical attention.  
**Ingestion** Do NOT induce vomiting. Wash out mouth with water. If symptoms develop seek medical attention.  
**Skin** Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.  
**Eye** If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and persist seek medical attention.  
**First Aid Facilities** Eye wash fountains and normal washroom facilities.  
**Advice to Doctor** Treat symptomatically.  
**Other Information** For advice in an emergency, contact a Poisons Information Centre (Phone Australia 13 1126; New Zealand 0800 POISON / 0800 764 766) or a doctor at once.

## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** Use appropriate fire extinguisher for surrounding environment.

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**Hazards from Combustion** Under fire conditions this product may emit toxic and/or irritating fumes and gases.

**Products Specific Hazards** Non-combustible

**Precautions in connection with Fire** Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures** For angular cobbles: Pick up mechanically or collect using hand-tools.  
For dust: Increase ventilation. Evacuate all unprotected personnel. Wear sufficient respiratory protection and full protective clothing to prevent exposure. Sweep up material avoiding dust generation or dampen spilled material with water to avoid airborne dust, then transfer material to a suitable container. Wash surfaces well with soap and water. Seal all wastes in labelled plastic containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If large quantities of this material enter waterways contact the Department of Environment, Climate Change and Water (DECCW), or your local Waste Management Authority.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of dust in the work atmosphere. Avoid inhalation of dust, and skin or eye contact. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

**Conditions for Safe Storage** Material is air cooled in slag pits. Store away from bases, water and other incompatible materials. Have appropriate fire extinguishers available in and near the storage area. Ensure that storage conditions comply with applicable local and national regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC), Australia. However, the available exposure limits for ingredients are listed below:

National Occupational Health And Safety Commission (NOHSC), Australia Exposure Standards:

Substance	TWA		STEL		NOTICES
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
Aluminium oxide	-	10	-	-	-
Calcium oxide	-	2	-	-	-
Magnesium oxide	-	10	-	-	-
Silicon dioxide	-	2	-	-	-
Quartz	-	0.1	-	-	-

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

**Biological Limit Values** No biological limit allocated.

**Engineering Controls** Use with good general ventilation. If dusts are produced local exhaust ventilation should be used.

**Respiratory Protection** If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable dust/particulate filter should be used. Reference should be made to Australian/New Zealand Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

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<b>Eye Protection</b>	Safety glasses with side shields or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
<b>Hand Protection</b>	Wear gloves of impervious material. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	Grey angular cobbles approximately 5-7 cm in diameter.
<b>Odour</b>	No odour detected at room temperature.
<b>Melting Point</b>	1300 to 1400°C (Based on similar product)
<b>Boiling Point</b>	Not available
<b>Solubility in Water</b>	Partially soluble in water.
<b>pH Value</b>	11.2 (at 0.4g/mL concentration)
<b>Vapour Pressure</b>	Not applicable
<b>Vapour Density (Air=1)</b>	Not applicable
<b>Volatile Component</b>	0.8%
<b>Density</b>	Not available
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Non-combustible
<b>Auto-Ignition Temperature</b>	Not applicable
<b>Flammable Limits - Lower</b>	Not applicable
<b>Flammable Limits - Upper</b>	Not applicable

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## 10. STABILITY AND REACTIVITY

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<b>Chemical Stability</b>	Stable under normal conditions of storage and handling.
<b>Conditions to Avoid</b>	None known
<b>Incompatible Materials</b>	None known
<b>Hazardous Decomposition Products</b>	Thermal decomposition may result in the release of toxic and/or irritating fumes.
<b>Hazardous Polymerization</b>	Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Toxicology Information</b>	Not available
<b>Inhalation</b>	Inhalation of dusts may irritate the respiratory system.
<b>Ingestion</b>	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
<b>Skin</b>	Skin contact may cause mechanical irritation resulting in redness and itching.
<b>Eye</b>	May be irritating to eyes. The symptoms may include redness, itching and tearing.
<b>Chronic Effects</b>	Prolonged or repeated exposure to the dust of this material this material may result in skin irritation and in irritation to the eyes and respiratory tract. Although not detected during testing (Alpha quartz was not detected at the limit of detection less than 0.5% w/w) - Dust from this product may contain

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## Carcinogenicity

traces of respirable crystalline silica, hence bronchitis, silicosis (scarring of the lungs) may occur.

This product may contain traces of respirable crystalline silica. Respirable crystalline silica has been classified by International Agency for Research on Cancer (IARC) as carcinogenic to humans by inhalation (Group 1).

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Not available

**Persistence /** Not available

**Degradability**

**Mobility** Not available

**Environ. Protection** Prevent this material entering waterways, drains or sewers.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Considerations** Dispose of waste according to applicable local and national regulations.

## 14. TRANSPORT INFORMATION

**Transport Information** Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

## 15. REGULATORY INFORMATION

**Regulatory Information** Not classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.  
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**Poisons Schedule** Not Scheduled

## 16. OTHER INFORMATION

**Date of preparation** MSDS Reviewed: December 2010

**or last revision of** Supersedes: November 2005

**MSDS**

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