

SAFETY DATA SHEET

AIR COOLED BLAST FURNACE SLAG

Infosafe No.: LPUZK
Issued Date: 13/09/2016
Issued by: BLUESCOPE STEEL (AIS) PTY LTD

1. IDENTIFICATION

Chemical Product and Company Identification

Approval No: 830

GHS Product Identifier

AIR COOLED BLAST FURNACE SLAG

Product Code

Company Name

BLUESCOPE STEEL (AIS) PTY LTD (ABN 19 000 019 625)

Address

Five Islands Road Port Kembla

NSW 2505 Australia

Telephone/Fax Number

Tel: 02 4275 7522 (24/7 switch board)

Fax: 02 4275 7159

Emergency phone number

131126 Poison Info

Recommended use of the chemical and restrictions on use

Air-cooled Blast Furnance Slag

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture

Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

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

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.)

Ingredients

Name	CAS	Proportion
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 affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion

Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin

Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye contact

If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities

Eyewash and normal washroom facilities.

Advice to Doctor

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products

Non combustible material.

Specific Hazards Arising From The Chemical

Non-combustible

Decomposition Temperature

Not available

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. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

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 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 EPA 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, including any incompatibilities

Material is air cooled in slag pits. Store in a cool, dry, well-ventilated area, out of direct sunlight and moisture. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values

No exposure standards have been established for this material. However, the available exposure limits for ingredients are listed below:

Aluminium oxide:

TWA: 10 mg/m³

Calcium oxide

TWA: 2 mg/m³

Dust not otherwise specified:

TWA: 10 mg/m³

Magnesium oxide:

TWA: 10 mg/m³

Silica:

TWA: 2 mg/m³

Quartz

TWA: 0.1 mg/m³, respirable dust

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.

Appropriate 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. Refer to Australian 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.

Eye Protection

Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

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. Occupational protective gloves should conform to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection

Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

9. PHYSICAL AND CHEMICAL PROPERTIES

Properties	Description	Properties	Description
Form	Solid	Appearance	Grey angular cobbles approximately 5-7 cm in diameter.
Colour	Not available	Odour	No detectable odour
Decomposition Temperature	Not available	Melting Point	1300 to 1400°C (Based on similar product)
Boiling Point	Not available	Solubility in Water	Partially soluble in water.
Specific Gravity	Not available	pH	11.2 (at 0.4g/mL concentration)
Vapour Pressure	Not applicable	Vapour Density (Air=1)	Not applicable
Evaporation Rate	Not available	Odour Threshold	Not available
Viscosity	Not available	Volatile Component	0.8%
Density	Not available	Flash Point	Not applicable
Flammability	Non-combustible	Auto-Ignition Temperature	Not applicable
Explosion Limit - Upper	Not applicable	Explosion Limit - Lower	Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

None known

Incompatible materials

None known

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes.

Possibility of hazardous reactions

Not available

Hazardous Polymerization

Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information

No toxicity data available for this material.

Ingestion

Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation

Inhalation of dusts may irritate the respiratory system.

Skin

May cause abrasive irritation in contact with the skin, which can result in redness, itching and possible dermatitis.

Eye

Eye contact may cause mechanical irritation. May result in mild abrasion.

Respiratory sensitisation

Not expected to be a respiratory sensitiser.

Skin Sensitisation

Not expected to be a skin sensitiser.

Germ cell mutagenicity

Not considered to be a mutagenic hazard.

Carcinogenicity

Not considered to be a carcinogenic hazard.

This product contains crystalline silica. Crystalline Silica (respirable size $\leq 7 \mu\text{m}$) has been classified by the International Agency for Research on Cancer (IARC) as Carcinogenic to Humans (Group 1).

Silicon dioxide is listed as a Group 3: Not classifiable as to carcinogenicity to humans according to International Agency for Research on Cancer (IARC).

Reproductive Toxicity

Not considered to be toxic to reproduction.

STOT-single exposure

Not expected to cause toxicity to a specific target organ.

STOT-repeated exposure

Not expected to cause toxicity to a specific target organ.

Aspiration Hazard

Not expected to be an aspiration hazard.

Other Information

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

12. ECOLOGICAL INFORMATION

Ecotoxicity

No ecological data available for this material.

Persistence and degradability

Not available

Mobility

Not available

Bioaccumulative Potential

Not available

Other Adverse Effects

Not available

Environmental Protection

Prevent this material entering waterways, drains or sewers.

13. DISPOSAL CONSIDERATIONS

Disposal considerations

The disposal of the spilled or waste material must be done in accordance with 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)

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

U.N. Number

None Allocated

UN proper shipping name

None Allocated

Transport hazard class(es)

None Allocated

Special Precautions for User

Not available

IMDG Marine pollutant

No

Transport in Bulk

Not available

15. REGULATORY INFORMATION

Regulatory information

Not classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, 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 or last revision of SDS

MSDS Reviewed: September 2016

Supersedes: December 2010

References

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.

Australian Code for the Transport of Dangerous Goods by Road & Rail.

Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

Workplace exposure standards for airborne contaminants.

Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).

Globally Harmonised System of classification and labelling of chemicals.

END OF SDS

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