

Safety Data Sheet SC

Trade Name: SC
Grades: SC
Original Issue Date: September 2003 (as MSDS 34)
This Issue: December 2015

SECTION 1:

Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier: Ground Granulated Blast Furnace Slag
Product Name: SC
Product Description: Sand-coloured blasting abrasive for stone
EC No: 266-002-0
CAS: 65996-69-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Blast cleaning abrasive for stone

The substance does not meet the criteria for classification as dangerous according to EC1272/2008. Therefore exposure assessment, risk characterisation and exposure scenarios for the identified uses through the life cycle is not required (REACH Regulations 1907/006, Annex 1 and ECHA Guidance on information requirements and chemical safety assessment part A)

1.3 Details of supplier of the safety data sheet

Hodge ClemcoLtd, Orgreave Drive, Sheffield S13 9NR, U.K.

Email address of person: sales@hodgeclemco.co.uk (Steve Robertson)

Emergency telephone number of the supplier

Telephone number: +44(0)114 254 8811
Hours of operation: Mon – Fri 08.30 – 1700

SECTION 2: Hazards Identification

2.1 Classification of substance or mixture

Classification according to Regulation (EC) No. 1272/2008 (which replaces Directive 67/548/EC (DSD))

Classification: Not classified. GGBFS does not meet the criteria for classification in accordance with the regulations EC1272/2008. No special conditions are therefore needed. Risk management measures due to the potential occurrence of hazardous dusts during use as an abrasive may be needed.

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 (which replaces Directive 67/548/EC (DSD))
None

2.3 Other hazards

Blast furnace and Steel-making Slag constitute a **LOW RISK** substance when associated with intended use and handles in much the same manner as **dry cement**.

However since this substance has cementaceous properties and is often blended with Ordinary Portland Cement (OPC) **it will liberate highly alkaline solutions when in contact with water** in association with its intended use. The user should consult Safety Data Sheets of Ordinary Portland Cement intended construction products - concrete and mortar.

Hazards associated with blast furnace and Steel-making Slag are synonymous with Ordinary Portland Cement and are classified under CHIP 3 2002 (Approved Classification and Labelling Guide – 5th edition) as:

2.3.1 Classification on the basis of Physicochemical Properties:

Inert – not being explosive, oxidising, flammable.

Use of this material as a blasting abrasive may generate dust so risk management measures may be needed.

2.3.2 Classification on the basis of health effects:

When product is wetted or in contact with sweat, tears, mucus membrane **highly alkaline solutions will be liberated**.

Skin

Wet product can cause skin disease.

Irritant contact dermatitis is caused by the combination of the wetness, alkalinity and abrasiveness of the product.

Allergic contact dermatitis may be caused by individual sensitivity to rare earth metals (eg. chromium compounds).

“Cement like” alkaline burns, a form of ulceration, may result from contact with this product.

Eyes

Wet product can cause irritation, inflammation or “cement like” burns on contact with eyes.

Ingestion / Inhalation

Swallowing of small amounts of product is unlikely to cause any significant reaction. Large amounts can cause irritation of the stomach and intestinal tract / respiratory tract.

2.3.3 Classification on the basis of environmental effects:

Uncontrolled release to watercourses will cause discolouration and raised alkalinity to the aquatic environment that may be injurious to some species of macro and micro vertebrates and invertebrates.

SECTION 3: Composition/information on ingredients

3.1 Composition:

Blast Furnace and Steel-making Slag are composed of complex un-hydrated silicates of aluminium, calcium, magnesium and iron. Traces of nickel and chromium and other rare earth metals may be present.

3.2 Information on ingredients:

Blast Furnace Slag is a bi-product of the steel making industry where iron ore, coal and limestone are heated to a molten state within blast furnaces. Impurities within the iron ore (parent rock and minerals) "float" to the surface whilst iron "sinks" within the blast furnace slag. The lower density slag is then drawn from the top of the molten iron / steel and cooled. The cooled slag (sometimes known as clinker) is then crushed, graded before reduced in particle size in a "ball mill" to that of cement. Higher density molten iron is drawn from the bottom of the furnace and cast in "ingots" or "pigs" for further product manufacture.

3.3 Intended Use:

Finely ground blast furnace and Steel-making slag has a similar chemistry to that of Ordinary Portland Cement (OPC) and blends form the basis of many concrete and mortar mixes – whereby the silicates of aluminium, calcium magnesium and iron hydrate to produce high strength and durable construction materials. Blast furnace and Steel-making Slag are also particularly blended to produce concretes that are more resistant to sulphur within ground waters often associated with sewage treatment and contaminated land.

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

- Inhalation:* Remove to fresh air. Get medical attention if symptoms occur. If breathing has stopped or is irregular, apply artificial respiration.
- Skin:* Wash with water. If "cement like" burns are observed seek immediate medical attention.
- Eye:* Wet product can cause irritation, inflammation or "cement like" burns on contact with eyes.
- Ingestion:* Wash out mouth and drink plenty of water. Do not induce vomiting and seek medical assistance.
- Advice to physician:* No specific advice. Treat according to symptoms present.

SECTION 5: Fire Fighting Measures

5.1 Extinguishing media

The product is non-combustible. Use an extinguishing agent appropriate to the surrounding materials.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: None

5.3 Advice for fire-fighters

Wear self-contained breathing apparatus and protective clothing

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid breathing dust. Use appropriate personal protective equipment.

6.2 Environmental precautions

Make sure spills can be contained. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and clean-up

Ventilate the area thoroughly. Vacuum loose material and place in a suitable container for recycling or disposal. Damp down before sweeping dry material.

6.4 References to other sections

Section 1 for emergency contact information
Section 8 for information on personal protective equipment
Section 13 for Waste Disposal

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Prevent formation of dust. Use only in well ventilated areas. Wear personal protective clothing. Wash hands and face before breaks and after work.

7.2 Conditions for safe storage including any incompatibilities

Keep dry. No other special requirements.

7.3 Specific end uses

Abrasive blast cleaning may fracture the product and generate dust. Ventilate work area in vicinity of operator

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters of relevance to industrial settings (occurrence of dusts, mists and fumes)

Name	WELs as per EH40/2005
Granulated Blast Furnace slag	TWA 8 hrs: 10mg/m ³ (total inhalable) TWA 8hrs: 4 mg/m ³ (total respirable)

8.1.2 PNECs and DNELs

Not available for the substance. The PNECs and DNELs of the elemental constituents apply.

8.2 Exposure controls for industrial settings

8.2.1. Appropriate Engineering Controls

Use process enclosures, local exhaust ventilation or other engineering controls to keep exposure to below any recommended or statutory limits. For storage and handling, general ventilation is adequate.

8.2.2 Personal Protective Equipment

Blasting operatives should wear a CE marked or HSE approved blasting helmet. Ancillary workers should use a P2 dust respirator and safety goggles. Operatives should always wear appropriate gauntlets. Operatives should wear heavy-duty coveralls or a purpose designed blasters' suit. If wet blasting is being carried out, use an impervious wet-blast suit.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<i>Appearance:</i>	Solid, powdery particles
<i>Colour:</i>	Sand-coloured
<i>Odour</i>	None to "earthy"
<i>Odour threshold:</i>	Not applicable
<i>pH:</i>	HIGHLY ALKALINE IF WET
<i>Melting point:</i>	>1000°C
<i>Initial boiling point and range:</i>	Not applicable
<i>Flash Point:</i>	Non flammable
<i>Flammability (solid/gas):</i>	Non-flammable
<i>Auto flammability</i>	Non flammable
<i>Vapour pressure:</i>	Not applicable -solid
<i>Vapour density:</i>	Not applicable
<i>Relative Density (ref water at 20°C)</i>	>2.0
<i>Solubility:</i>	Not soluble
<i>Explosive properties:</i>	Non explosive
<i>Oxidising properties:</i>	Non oxidising

9.2 Other information

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not applicable. See Section 9.

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

Avoid contact with acids (particularly hydrochloric acid) which may liberate carbon dioxide which may build up, if unventilated, and form harmful atmospheres.

10.4 Conditions to avoid

Avoid dust formations and contact with acids

10.5 Incompatible materials

Strong acids

10.6 Hazardous decomposition products

The material does not decompose.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute effects:

Chemical contact burns may occur particularly to eyes and skin due to highly alkaline nature of this products and particularly during intended use. In severe cases alkaline burns have caused irreversible destruction of skin tissue.

Chronic effects:

If inhaled in excessive quantities over a prolonged or extended period respirable dust can constitute a long term health hazard

SECTION 12 Ecological information

Environmental Assessment:

When used and disposed of as intended, no adverse environmental effects are foreseen. Use of blast furnace and steel-making slag provides a favourable environmental option in conserving natural resources associated in the manufacture of Ordinary Portland Cement.

Ecological – Aquatic environment

Uncontrolled release to watercourses will cause discolouration and raised alkalinity to the aquatic environment that may be injurious to some species of macro and micro vertebrates and invertebrates.

SECTION 13: Disposal considerations

The abrasive must be disposed of in accordance with national legislation (See Section 16) and local regulations. The material as supplied is classed as a non-hazardous inert solid waste, European Waste Catalogue (EWC 2002) 10 02 02 (blast furnace slag from iron/steel production). Spent abrasive used as a blasting medium must be disposed of under classification 12 01 16 (waste blasting material containing dangerous substances) or 12 01 17 (waste blasting material other than those mentioned in 12 01 16). The waste producer must determine if hazardous substances in the coating being removed are likely to cause the waste to be hazardous.

SECTION 14: Transport information

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazardous classes

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL and the IBC code

Not applicable

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

The product is not subject to identification regulations under EC Directives

SECTION 16: Other information

Abbreviations and acronyms:

CAS	- Chemical Abstracts Service number
CLP	- Classification, Labelling and Packaging Regulation (Regulation (EC) No. 1272/2008)
DNEL	- Derived No-effect Level
EC	- European Commission
EC No.	- European Chemical number (replaces EINECS, ELINCS or NLP)
ECHA	- European Chemicals Agency
PNEC	- Predicted No Effect Concentration