

PRODUCT INFORMATION SHEET

Product and Reference: Iron silicate / Copper slag

Date of Issue: 11/04/2018

1. Identification of the Preparation and Company

Company: Lakeland Carbons, Flusco Works, Penrith, Cumbria

Email; info@lakelandcarbons.co.uk

Tel number; 017684 83726 (including out of hours)

Product Code: Lakeblast

Intended Use: Abrasive for surface preparation, flooring, and decorative aggregate

2. Hazards Identification

2.1 Classification

This substance is not classified as hazardous under the CLP Regulations (1272/2008/EC) or as dangerous under the Dangerous Substances Directive (67/548/EEC) It is not included in the ECHA candidate list of substances of very high concern and is not defined in Annex XIII of the REACH Regulations as PBT or vPvB

2.2 Labelling

No labelling required according to EC 1272/2008 and Directive 67/548/EEC

2.3

Use of this material may generate dust

3 Information on composition

The material is a synthetic mineral with a strongly bonded and complex matrix structure of different elements produced by quenching molten slag into cold water. This produces an amorphous glass substance. The various components have been reported as oxides to simplify the structure.

<u>Component Name</u>	<u>Codes</u>	<u>Concentration %</u>
Silica Oxide	SiO ₂	27 –30 %
Calcium Oxide	CaO	0 -2.5 %
Aluminium Oxide	Al ₂ O ₃	0 – 4.5 %
Iron Oxide	FeO	35 - 50 %
Magnesium Oxide	MgO	0.2 – 1.5 %

Zinc Oxide	ZnO	0.5 –1.5 %
Copper Oxide	CuO	0 - 1.0 %
Sulphur	S	0.2 - 0.7 %
Nickel Oxide	NiO	20 – 250 g/t
Lead Oxide	PbO	0.1 – 0.3 %

All other elements are trace elements

There is essentially no free silica in this product.

4. FIRST AID MEASURES

General:

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation:

Remove to fresh air, keep the patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.

Skin Contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner.

Ingestion:

Mouth rinse and give water to drink. Do not induce vomiting

Eye:

Eye wash with plenty of water.

The product may cause temporary mechanical irritation to the eyes, nose, throat and lungs.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media:

Water or an agent suitable to the surrounding environment, there are no unsuitable medias.

5.2 Special Hazards arising from the substance

Inhalable Dust

5.3 Advice for fire fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Recovery measures:

Product can be swept up dry or wet. Personnel should use appropriate personal protective equipment particularly if material is in powder form and dry.

7. HANDLING AND STORAGE**Handling:**

Avoid breathing dust and spillage whilst handling.

The Manual Handling Operations Regulations may apply to the handling of bags when carrying out assessments.

Storage:

The storage and use of this product are not subject to any requirements but it should be kept dry where this is important for further process use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**General:**

a) Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should only be employed in processes in which this product is used under supervision.

b) Persons with a history of skin sensitisation problems should only be employed in processes in which this product is used under appropriate medical supervision.

Engineering Measures:

Provide adequate ventilation. Where reasonably practicable this should be achieved using local exhaust ventilation and good general extraction during process use.

Occupational Exposure Standards:

- | | |
|--------------------|--|
| 1. Total dust | Less than 10 mg per cubic metre 8h TWA |
| 2. Respirable dust | Less than 4 mg per cubic metre 8h TWA |

Personal Protection:

All Personal Protective Equipment, include Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected to meet the requirements of the COSHH Regulations.

Respiratory Protection:

Use properly fitted respiratory protection, complying with an approved standard, appropriate for the known or anticipated exposure levels and the hazards of the product. Blasters should wear an air-fed blasting helmet complying with approved standards to afford the correct level of respiratory and eye/face protection.

Hand Protection:

When skin exposure may occur, advice should be sought from glove suppliers on appropriate types. Barrier creams may help to protect exposed areas of the skin but are not substitutes for full physical protection.

Eye Protection:

Eye protection designed to protect against impact to the eye should be worn.

Skin Protection:

Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed, and the skin washed with soap and water or a proprietary skin cleaner.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid, angular black particles
Odour	None
pH	Not applicable
Explosion Limits (%)	Non explosive
Flash point:	Not applicable
Solubility in water	(kg/m ³) Insoluble
Relative density	3.11 – 4.2
Initial boiling rate and range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Non flammable
Vapour pressure	Not applicable
Vapour density	Not applicable
Solubility	Poorly soluble
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Decomposition and/or melting starts at 1059 C
Viscosity	Not applicable
Explosive properties	Non explosive
Oxidising properties	Non oxidising

10. STABILITY AND REACTIVITY**10.1 Reactivity**

Not applicable. See section 9.

10.2 Chemical stability

Under normal conditions of use and storage, the product is stable.

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.4 Conditions to avoid

Avoid dust formation and contact with acids

10.5 Incompatible materials

Strong acids

10.6 Hazardous decomposition products

The substance does not decompose. Trace metals are firmly built in or bonded into the glass/crystal structures of the silicate and other mineral phases. Therefore, the release of metals soluble species is very limited.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity Oral: Not classified as hazardous for acute toxicity by oral route

Inhalation: Not classified as hazardous for acute toxicity by inhalation route

Dermal: Not classified as hazardous for acute toxicity by dermal route

Irritation/Corrosion

Skin/Eye: Not irritating

Sensitiser:

Skin/ Respiratory:

Mutagenicity: Negative

Carcinogenicity: Negative

Reproductive Toxicity: Negative

STOT (repeated exposure) : Not classified by oral or inhalation route

For further information on the testing methods please refer to us

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Environmental bioavailability The uptake of copper slag by living organisms is related to the degree to which the metal mineral phases in the slag react with water/biological fluids and release soluble, potentially bio-available ions and other metal bearing species.

Standardized (OECD) transformation/dissolution tests of copper slag were carried out to study its potential to release soluble available ionic and other metal bearing species to the environment (Rodriguez et al.,2010). Transformation/dissolution tests for 7 days at pH 6 (worst case) and loading of 100mg/L were performed on 12 samples. The results demonstrate low releases of copper to the OECD media: 2.6 ug Cu/L from granules. Other metals lead, nickel, zinc, arsenic and cadmium were below the detection limits.

Acute freshwater toxicity Not classified
Further information available on application

Chronic freshwater toxicity and PNEC derivation: Not classified
Further information available on application

12.2 Persistence and degradability

Not degraded in classic terms but geochemical cycling leads to removal of the metals from the system

12.3 Bio accumulative potential

Not applicable

12.4 Results of PBT and vPvB assessment

Copper slags are not PBT or vPvB

12.5 Other adverse effects

None

13. DISPOSAL CONSIDERATIONS

The material in its supplied form is non-hazardous inert solid waste and is classified as such under-Appendix A section of the Consolidated European Waste Catalogue EC Landfill Directive (16th July 2004), entry 10 06 01.

The disposal of material after it has been used may cause the product to fall into a different category. Likely categories are 12 01 16, waste blasting material containing hazardous substances or 12 01 17, waste blasting material other than those mentioned in 12 01 16. Please note that a metal ion analysis, in isolation, may lead to an incorrect classification.

14. TRANSPORT INFORMATION

14.1 UN Number Not	applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard classes	Not applicable
14.4 Packaging 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 73/78 and the IBC code	Not applicable

15. REGULATORY INFORMATION

The information contained in this safety data sheet does not constitute the supplier's own assessment of workplace risks as required by other Health and Safety legislation. The provisions of the Health and Safety at Work Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

16. OTHER INFORMATION

Abbreviations and Acronyms

CLP – Classification, Labelling and Packaging Regulation EC no 1272/2008

DNEL – Derived No Effect Level

EWC – European Waste catalogue

Key literature references and sources of data;

Workplace Exposure Limits – 2005 HSE EH40/2005 and Supplement 2007

EC Commission Directive 2001/58/EC

EC Commission Regulation 1907/2006 and amendment EC 987

/2008

Legislation

The Waste (England & Wales) regulations 2011

The Waste (Miscellaneous Provisions) (Wales) Regulations 2011

The Waste (Scotland) regulations 2011

The Waste (Northern Ireland) regulations 2011

The List of Wastes Regulations 2005

Disclaimer

The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications, and we do not accept any liability for any loss or damage, however arising, which may result directly or indirectly from the use of this information