

SAFETY DATA SHEET

GROUND GRANULATED BLASTFURNACE SLAG (GGBS)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identification

A fine off-white to light grey powder which is used as an cementitious additive.

Substance Ground Granulated Blastfurnace Slag (GGBS)

REACH Registration Number: 01-2119487456-25

EINECS: 266-002-0

CAS: 65996-69-2

Trade Name(s):

Ground Granulated Blastfurnace Slag (GGBS)

Identified uses of the substance or mixture

Used as a cementitious component in concrete, mortar and grout.

Company Identification

Lafarge Cement Ltd
C/O Aggregate Industries,
Bardon Hill,
Coalville,
Leicestershire,
LE67 1TL

Emergency Contact Details

Telephone : 01530 510066
(Mon. to Fri. 8 am to 5 pm) ask for H&S Team
Email: health.safety.team@aggregate.com

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not classified as hazardous according to Regulation (EC) No. 1907/2006.

GGBS is a fine powder which can cause mechanical irritation to the eyes and respiratory system. When mixed with water the resultant liquid may become alkaline.

Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

GGBS is a vitrified substance which is a byproduct of iron production in a blast furnace. It consists primarily of oxides of calcium, silicon, aluminium and magnesium.

Contains less than 1% crystalline silica.

Contains less than 2 ppm water soluble chromium VI.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation

Remove to fresh air and allow person to rest. Seek medical advice if irritation persists.

Skin Contact

Remove any contaminated clothing. Wash with soap/ cleanser and rinse with plenty of water.

Eye Contact

Do not rub eyes, as the material is abrasive and may scratch the surface of the eye. Immediately and thoroughly irrigate with water with eyelids open for approximately 15 minutes. Seek medical advice if irritation persists.

Ingestion

Rinse mouth and drink plenty of water.

5. FIREFIGHTING MEASURES

Material is not flammable and will not facilitate combustion with other materials.

Suitable/Unsuitable extinguishing media

Use media suitable for other any other materials present that may be involved in a fire.

Special hazards arising in a fire

None, material does not combust and therefore will not release any combustion products.

Special Advice for fire fighters

None, general measures to fight fires are applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid breathing dusts and excessive physical contamination. Follow exposure controls such as protective equipment and environmental exposure controls as described under section 8 and follow advice for safe handling and storage under section 7.

Environmental precautions

Avoid dispersal of airborne dust. Entry into watercourses such as drainage system and bodies of water should be avoided so far as is possible.

Methods and materials for containment and cleaning up

If possible recover the spillage in a dry state by mechanical means such as vacuuming, to minimise generation of airborne dust. The product can be slurried by the addition of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Follow recommendations for exposure control under section 8.

Bags may have small amounts of GGBS on the outer surface and appropriate personal protective clothing should therefore be used.

Precautions for Safe Storage

Bulk GGBS should be stored in silos that are waterproof, dry (i.e. with internal condensation minimised), clean and protected from contamination.

Packed products should be stacked in a stable manner.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace exposure limits (WELs)

It is recommended that the Dust WEL (EH40) be applied to GGBS as follows:

Component	WEL (8Hr TWA)
Total Inhalable Dust	10mg/m ³
Respirable Dust	4mg/m ³

It is recommended that occupational monitoring be completed to determine exposure.

Exposure controls

Appropriate engineering controls

Measures to reduce generation of dust and to avoid dust propagating in the environment such as de-dusting, exhaust ventilation and dry cleanup methods which do not cause airborne dispersion.

Individual Protection Measures such as personal protective equipment

Eye/face Protection

Eye protection in the form of safety goggles according EN166 is required whenever there is a risk of GGBS powder or any GGBS/water mixture entering the eye.

Hand Protection

Handle with watertight, wear-and alkali-resistant protective gloves according to EN345 class 3 (eg nitrile soaked cotton gloves with CE marking). Use skin care products (eg barrier creams) as appropriate. For the gloves, respect the maximum wearing time to avoid skin problems.

Gloves should be removed and hands thoroughly washed before handling or eating any food or drink.

Skin Protection

Overalls / Impervious clothing, selected according to the workplace conditions.

Respiratory Protection

Suitable dust masks should be worn in enclosed spaces where adequate ventilation is not provided.

The type of respiratory protection should be adapted to the dust level and conform to the relevant EN standard, (e.g. EN 149, EN 140, EN14387, EN 1827) or national standard.

The type, fit and comfort as well as the duration of the activity should also be considered when choosing RPE. The effectiveness of RPE relies on the individual's competence and therefore a suitable policy for a respiratory protective device use including training & face fit testing of the workers should be in place.

Environmental exposure controls

Air

Environmental emission of GGBS particles into air has to be in accordance with local environmental regulations and the best available technology (BAT).

Water

Do not wash GGBS into drainage system such as the public sewer or storm drains.

Soil and terrestrial environment

No special control measures are necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties are as follows:

Property	
Appearance	Off white to light grey powder with a particle size less than 30 micron (μm)
Odour	None or slight sulphur odour
pH	10 - 12
Boiling Point / Range	Not Applicable
Melting Point / Range	>1000°C
Flash Point	Non-flammable
Flammability	Non-flammable
Auto Flammability	Non-combustible solid
Explosive Properties	None
Oxidizing Properties	None
Vapour Pressure	Not Applicable
Relative Density	1.8 to 2.4
Water Solubility	Slight - Less than 1 g/l
Fat Solubility	Not Determined

10. STABILITY AND REACTIVITY

Reactivity

GGBS has a low reactivity and does not react under normal storage and use conditions.

Chemical stability

GGBS is chemically stable.

Conditions to avoid

GGBS should be stored enclosed such as a product bags or

silos and avoid storing out in the open. If so to prevent wind blown dust it should be stored in a damp state.

Incompatible materials

GGBS has no known incompatible materials.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity

Not classified as dangerous.

Eye Damage

Long term contact with eyes can cause eye irritation and damage.

Skin corrosion/irritation

Long term contact with skin may cause mechanical skin irritation. No know evidence of skin sensitisation.

Respiratory sensitisation

No known evidence of respiratory tract or lung problems.

Ingestion

Not likely to cause long term problems.

12. ECOLOGICAL INFORMATION

Environmental Assessment

When used and disposed of as intended, no adverse environmental effects are foreseen.

Ecotoxicity

In large Quantities the addition of GGBS into water will cause the pH to rise and may reduce oxygen availability, which might be toxic to aquatic life in some circumstances.

Mobility

Not relevant.

Persistence and Degradability

Not relevant.

Bioaccumulative potential

Not relevant.

Results of PBT and vPvB assessment

Not relevant.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Uncontaminated spillages can be reused. Dispose of according to the local legislation. Avoid entry into the sewage water system.

Contaminated packaging

Completely empty the packaging and process it according to local legislation.

14. TRANSPORT INFORMATION

GGBS is not covered by the international regulation on the transport of dangerous goods (IMDG, IATA,ADR/RID), therefore no classification is required.

No special precautions are needed apart from those mentioned under Section 8.

UN number

Not relevant

UN proper shipping name

Not relevant

Transport hazard class(es)

Not relevant

Packing group

Not relevant

Environmental hazards

Not relevant

Special precautions for user

Not relevant

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not relevant

15. REGULATORY INFORMATION

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

GGBS does not meet the requirements for classification as dangerous under the EU Dangerous Substances (67/584/EEC) Directive or the Classification, Labelling and Packaging of substances and mixtures (CLP) regulations (EC1272/2008).

GGBS is not classified as Dangerous by any UK national legislation.

Chemical Safety Assessment

No chemical safety assessment has been carried out for this mixture by the supplier.

16. OTHER INFORMATION

Training and Advice

In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS.

Recommended restrictions on use

Use in accordance with manufacturer's technical instructions.

Further Information

Contact the Aggregate Industries Health & Safety Team.

Key Data used to compile data sheet

<https://echa.europa.eu/registration-dossier/-/registered-dossier/16142/4/21>