

Uniclass L621

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August 2016

# SAFETY INFORMATION

## GROUND GRANULATED BLASTFURNACE SLAG (GGBS)

(BS EN 15167-1) Health and Safety Information

### FOREWORD

Granulated Blastfurnace Slag is registered as a substance under the REACH Regulation (EC 1907/2006). Its REACH Registration number is 01-2119487456-25. This safety data sheet provides information about the substance to enable appropriate risk management measures to be identified and applied.

Because Granulated Blastfurnace Slag does not meet the requirements for classification as dangerous under the EU Dangerous Substances (67/548/EEC) Directive or the Classification, Labelling and Packaging of substances and mixtures (CLP) regulations (EC1272/2008), there is no requirement to provide a full Material Safety Data Sheet in accordance with Article 31 of REACH. No authorisation is required under Title VII of REACH and no restriction is imposed under Title VIII of REACH.

### 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

#### 1.1 Identification of the substance

Ground Granulated Blastfurnace Slag (GGBS)  
REACH Registration number: 01-2119487456-25  
CAS number: 65996-69-2  
EINECS number: 266-002-0

#### 1.2 Use of the substance

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

#### 1.3 Company identification

Tarmac Cement  
T3 Tarmac, Ground Floor, T3 Trinity Park, Bickenhill Lane,  
Birmingham, B37 7ES  
Technical helpdesk: 0345 812 6232  
Email: info-cement@tarmac.com

#### 1.4 Emergency telephone

Emergency telephone number available during office hours:  
Tel 0345 812 6232  
Emergency telephone number available  
outside office hours: No

### 2. HAZARD IDENTIFICATION

GGBS is a fine powder, which can cause mechanical irritation to the eyes and respiration system. When mixed with water, the resultant liquid will gradually become alkaline with a pH up to 12. GGBS may be hot when delivered in bulk.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

GGBS consists principally of the oxides of calcium, silicon, aluminium and magnesium with low solubility in water giving a weak alkaline solution. The fineness is approximately 500m<sup>2</sup>/kg.

### 4. FIRST-AID MEASURES

#### 4.1 Eye Contact

Rinse the eyes with water with the eyelids open.  
Seek medical advice if irritation persists.

#### 4.2 Skin Contact

Wash with soap and water.

#### 4.3 Ingestion

Rinse mouth and drink plenty of water.

#### 4.4 Inhalation

Move affected person into fresh air.  
Seek medical advice if irritation persists.

### 5. FIRE-FIGHTING MEASURES

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

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal Precautions

Refer to Section 8.

#### 6.2 Cleaning Up

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

## 7. HANDLING AND STORAGE

### 7.1 Handling

Refer to Sections 2 and 8. Bags may have a small amount of GGBS on the outer surface and appropriate personal protective clothing should therefore be used.

### 7.2 Storage

Bulk GGBS should be stored in air-tight silos.

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

### 8.1 Exposure limit values

GGBS is not currently listed in the table of Workplace Exposure Limits (WELs), approved by the UK Health and Safety Commission. On the basis of the WELs for similar materials (eg, Portland cement and calcium silicate), Tarmac Cement recommend applying a WEL of 10mg/m<sup>3</sup> total inhalable dust, 4mg/m<sup>3</sup> respirable dust. (as 8hr Time Weighted Average). See HSE Guidance Note EH40 for further information.

### 8.2 Exposure controls

#### 8.2.1(a) Respiratory Protection

Where practicable, dust exposure should be controlled by engineering methods. Otherwise, suitable respiratory protection should be worn to ensure that personal exposure is less than the WEL.

#### 8.2.1(b) Hand Protection

Waterproof gloves should be worn, particularly when handling any GGBS/water mixture, eg, concrete or mortar.

#### 8.2.1(c) Eye Protection

Dust-proof goggles should be worn wherever there is a risk of GGBS powder or any GGBS water mixture entering the eye.

#### 8.2.1(d) Skin Protection

Protective clothing should be worn which ensures that GGBS or any GGBS/water mixture eg, concrete or mortar, does not come into contact with the skin. In some circumstances such as when laying concrete, waterproof trousers and Wellingtons may be necessary. Particular care should be taken to ensure that wet concrete does not enter the boots and persons do not kneel on the

wet concrete so as to bring the wet concrete into contact with unprotected skin. Should wet mortar or wet concrete get inside boots, gloves or other protective clothing then this should be immediately removed and the skin Thoroughly washed as well as the protective clothing/footwear.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: off-white powder with a particle size generally less than 30 micron

Odour: may have a mildly sulphurous odour

pH of wet ggbs: 10 - 12

Melting point: > 1,000° C Flash point: non-flammable

Flammability: non-flammable

Explosive properties: none

Oxidising properties: none

Water solubility: slight <100 mg/L

Contains less than 1% crystalline silica

Contains less than 1ppm water-soluble chromium VI

## 10. STABILITY AND REACTIVITY

GGBS is low-reactivity, chemically stable and does not produce hazardous decomposition products.

## 11. TOXICOLOGICAL INFORMATION

The substance is not classified as dangerous. Details of the toxicological tests submitted as part of the REACH dossier for this substance are available on the European Chemicals Agency website.

## 12. ECOLOGICAL INFORMATION

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

## 13. DISPOSAL CONSIDERATIONS

Dispose of empty bags or discarded GGBS to a place authorised to accept Builder's waste.

## 14. TRANSPORT INFORMATION

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

### For further information

#### Technical helpdesk

Tel: 0345 812 6232

E-mail: [info-cement@tarmac.com](mailto:info-cement@tarmac.com)

#### Customer services & sales

Tel: 0845 812 6300

E-mail: [customerservice@tarmac.com](mailto:customerservice@tarmac.com)

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#### DISCLAIMER:

This material safety data sheet (MSDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this MSDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this MSDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the MSDS supersedes all previous versions.