

## SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 91/155/EC,  
2006/1907/EC AND 2006/121/EC

### IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/ UNDERTAKING

Identification of the substance or preparation:  
**Ground Granulated Blastfurnace Slag (GGBS)**

Company Identification: Francis Flower,  
(Northern) Ltd, The White House, Gurney Slade,  
Radstock, Somerset, BA3 4UU

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Reach Registration Number: 01-2119487456-25

Use of Substance / Preparation: Constituent of  
standard cements (EN197-1) and special binders,  
concrete preparation, road construction

### HAZARDS IDENTIFICATION

EC Classification: This substance does not meet  
the requirements for classification as dangerous  
under both the EU Dangerous Substances  
(67/548/EEC) Directive and secondly according  
to the Classification, Labelling and Packaging of  
substances and mixtures (CLP) regulations (EC  
1272/2008).

Dust of granulated slag can act as an irritant  
and cause mechanical irritation to the eyes and  
respiratory system.

### COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Chemical Composition

Substance related information: Slags, ferrous  
metal, EG-Nr: 266-002-0 CAS-Nr: 65996-69-2  
complex CA-Mg-Al- silicate composition

Further information: Granulated slag is a vitrified  
substance, which is a by-product of iron production  
in a blast furnace. The structure of the granulated  
slag depends on the temperature during cooling.

#### 4. First aid measures

##### 4.1 Inhalation

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

##### 4.2 Skin Contact

Wash with soap and water.

##### 4.3 Eye Contact

Rinse the eyes with water, with the eyelids open.

##### 4.4 Ingestion

Seek medical advice if irritation persists. Rinse  
mouth and drink plenty of water.

#### 5. Fire-fighting measure

##### 5.1 Extinguishing Media

The product does not burn. Co-ordinate fire-  
fighting measures with surrounding.

##### 5.2 Unsuitable Extinguishing Media

None.



### Contact

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Percival Lane, Runcorn,  
Cheshire, WA7 4UY

## 5.3 Special hazards arising from the substance or mixture

None

## 5.4 Advice for firefighters

Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions

Avoid dust dispersal

### 6.2 Environmental Exposure Controls

Not necessary/applicable

### 6.3 Methods for cleaning up

Collect mechanically and avoid disturbing dust.

Use dust reducing cleaning method

## HANDLING AND STORAGE

### 7.1 Precautions for safe handling

#### 7.1.1 Advice on safe handling

Avoid dust dispersion. Where applicable keep dust wet. In closed areas provide adequate ventilation to prevent dust inhalation

#### 7.1.2 Technical measures

In case of further handling with foreseeable high dust dispersion, use for example an exhaust ventilation to prevent dust inhalation

#### 7.1.3 Advice on general occupational hygiene

Do not eat, drink, smoke or take snuff while working.

Wash hands before breaks and after work.

## 7.2 Conditions for safe storage, including any incompatibilities

None

## EXPOSURE CONTROLS/PERSONAL PROTECTION

Ensure adequate ventilation. This can be achieved by local exhaust ventilation or general ventilation.

### 8.1 Control parameters

See table below

#### 8.1 Respirators

In high dust concentration:  
EN149 FFP2 filter



#### 8.2 Eye Protection

Eye protection with side protection (EN 166).



#### 8.3 Gloves

Gloves to conform to 89/686/EEC. Wear at permanent or occasional contact with product. Gloves made of fabric coated with nitrile rubber, breakthrough time (maximum wear duration) > 480 minutes.



#### 8.4 Other

Wear suitable protective clothing.

SUBSTANCE.	CAS No.	LTCL (8 hr TWA ppm)	LTCL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note:
Dust.	-	6	3			Respirable Dust.
		20	10			Inhalable Dust.

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## PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

### Form

Granulated: 0/5 mm Powder <100 µm

### Colour

Grey

### Odour

Odourless

### pH (Value)

10-12 (DEV-S4-eluate according EN 12457-4)

### Melting Point (°C)

>1000°C

### Flash Point (°C)

Non-flammable.

### Explosive Properties

Not explosive.

### Oxidising Properties

Not applicable.

### Solubility (Water)

<1g/l

### Density

Approx. 2.4-3 g/cm<sup>3</sup> (at 20°C)

## STABILITY AND REACTIVITY

### 10.1 Conditions to avoid

None

### 10.2 Incompatible materials:

None

### 10.3 Hazardous Decomposition Product(s)

None

## TOXICOLOGICAL INFORMATION

### 11.1 Acute effects

#### 11.1.1 Acute toxicity

Oral: Tested substance GBS. OECD Guideline 401, Wistar rat LD50>2000mg/kg CSR

Inhalative: Tested substance GGBS. OECD Guideline 403, Wistar rat LC50 (powder) (4h) >5234 mg/m<sup>3</sup> CSR

#### 11.1.2 Irritant/corrosive effects

Skin: Tested substance ABS. OECD 404, New Zealand White rabbit result: not irritant CSR

Eye: Tested substance ABS. OECD 405, New Zealand White rabbit result: not irritant CSR

### 1.2 Sensitisation

#### 1.2.1 Skin: tested substance ABS.

OECD 406, Dunkin - Hartley guinea pig result: not sensitive CSR

#### 1.3 Repeated dose toxicity (subacute, subchronic, chronic

n.d.a.

#### 1.4 CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

##### 11.4.1 Mutagenicity: tested substance ABS

Reversed mutation test, EU method B.13/14.

Salmonella typhimurium result: no mutagenic effect CSR

Mutagenicity: tested substance ABS. Mammalian cell gene mutation test, EU method B.17. Chinese hamster lung fibroblast (V79) result: no mutagenic effect CSR

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## 11.5 Experiences made in practice

None

## 11.6 Additional information

None

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### 12.1.1 Short-term fish toxicity, tested substance GBS

OECD 203, *Leuciscus idus*  
LC0 (96h) > 1000 g/l  
LC50 (96h) > 1000 g/l CSR

Short-term toxicity aquatic invertebrates, tested substance GBS

OECD 202, *Daphnia magna*  
EC0 (48h) > 1000 g/l  
EC50 (48h) > 1000 g/l CSR

Algae toxicity, tested substance GBS  
OECD 201, *Scenedesmus subspicatus*  
IC0 (72h) > 100 g/l  
IC50 (72h) > 100 g/l CSR

Micro organism toxicity, tested substance ABS  
OECD 209, activated sludge  
EC10 (3h) > 10 g/l  
EC50 (3h) > 10 g/l  
EC100 (3h) > 10 g/l CSR

Long-term toxicity aquatic invertebrates, tested substance ABS

OECD 211, *Daphnia magna*  
EC10 (21d) 5 g/l  
EC20 (21d) > 5 g/l  
EC50 (21d) > 5 g/l CSR

### 12.2 Persistence and degradability

n/a

### 12.3 Bioaccumulative potential

No evidence for bioaccumulation potential

### 12.4 Mobility in soil

n.d.a.

### 12.5 Results of PBT assessment

n.d.a.

### 12.6 Other adverse effects

No negative ecological effects are expected according to the present state of knowledge

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Granulated blast furnace slag can be recovered after spillage. In the case there is no further use, the slag can be disposed following local legislation.

### 13.2 List of proposed waste codes/waste designations in accordance with AA (or EWC):

Waste classification due to trade and processing. Disposal is possible as follows: EWC-Code: 10 02 01: waste from the processing of slags.

## 14 TRANSPORT INFORMATION

### 14.1 Land transport (ADR/RID/CDG Road/CDG Rail)

No hazardous material as defined by transport regulations

### 14.2 Inland waterway craft (AND/ADNR)

No hazardous material as defined by transport regulations

### 14.3 Marine transport (IMO)

No hazardous material as defined by transport regulations

### 14.4 Air transport (ICAO/IATA)

No hazardous material as defined by transport regulations

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## 15 REGULATORY INFORMATION

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

**15.1.1 EU Law**

None

**15.1.2 National law:**

See national legislation

**15.2 Chemical safety assessment**

Not necessary

## 16. OTHER INFORMATION

**16.1 Documentation of changes:**

New document

**16.2 Training instructions:**

None

**16.3 Recommended restrictions on use:**

None

**16.4 Further information:**

**Abbreviations**

n.d.a. - No data available

n.a - Not applicable

ABS - Air-cooled blastfurnace slag

GGBS - Ground granulated blastfurnace slag

CSR - Chemical Safety Report Ferrous Slags

## REGULATORY INFORMATION

Classification according to Dangerous Product Regulations incl. EC Directives 67/548/EEC, 1999/45/EC and 2006/121/EC.

**EC Classification**

Not classified as dangerous for supply/use.

## Hazard Symbol



**Risk Phrases**

R38 and R41

**Safety Phrases**

Not applicable.

## INTERNATIONAL INVENTORIES

**EINECS (Europe)**

EINECS: Included.

## OTHER INFORMATION

This Safety Data Sheet was prepared in accordance with Directive 2001/58/EC. The following sections contain revisions or new statements: 1 - 16

## GLOSSARY

WEL: Workplace Exposure Limit (UK HSE EH40)

**Risk Phrases:**

R38: Irritating to skin.

R41: Risk of serious damage to eyes.

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