

## SECTION 1: Identification

### 1.1. Product identifier

Product form : Substance  
Substance name : Ground granulated blast furnace slag

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

Use of the substance/mixture : Cement extender  
Use of the substance/mixture : Construction materials additives

### 1.3. Supplier's details

AfriSam (South Africa) (Pty) Ltd  
Constantia Park  
cnr 14th Ave and Hendrik Potgieter Rd  
1715 Roodepoort Gauteng  
South Africa  
T 011 670 5500

### 1.4. Emergency telephone number

Emergency number : 011 670 5500

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to the United Nations GHS

Skin corrosion/irritation, Category 2 H315  
Serious eye damage/eye irritation, Category 1 H318  
Specific target organ toxicity – Single exposure, Category 3, H335  
Respiratory tract irritation  
Full text of H-statements: see section 16

### 2.2. Label elements

#### Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :



Signal word (GHS-ZA) : Danger  
Hazardous ingredients : CALCIUM OXIDE  
Hazard statements (GHS ZA) : H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H335 - May cause respiratory irritation.  
Precautionary statements (GHS ZA) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 - IF ON SKIN: Wash with plenty of water.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER or doctor.  
P312 - Call a POISON CENTER or doctor if you feel unwell.  
P321 - Specific treatment (see supplemental first aid instruction on this label).  
P332+P313 - If skin irritation occurs: Get medical advice/attention.

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P362+P364 - Take off contaminated clothing and wash it before reuse.  
P403 - Store in a well-ventilated place.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Adverse physicochemical, human health and environmental effects : May cause respiratory irritation, Causes skin irritation, Causes serious eye damage.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : Ground granulated blast furnace slag  
Product identifiers: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
Slags, ferrous metal, blast furnace	CAS-No.: 65996-69-2	100	Not classified
CALCIUM OXIDE	CAS-No.: 1305-78-8	32 – 35	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.  
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation.  
Symptoms/effects after skin contact : Irritation.  
Symptoms/effects after eye contact : Serious damage to eyes.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

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### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid uncontrolled release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.  
Other information : Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### CALCIUM OXIDE (1305-78-8)

#### South Africa - Occupational Exposure Limits (Restricted Limits)

OEL TWA	4 mg/m <sup>3</sup> REGULATIONS FOR HAZARDOUS CHEMICAL AGENTS, 2021 Table 3: OCCUPATIONAL EXPOSURE LIMITS - RESTRICTED LIMITS FOR HAZARDOUS CHEMICAL AGENTS
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### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid uncontrolled release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves  
Eye protection : Safety glasses  
Skin and body protection : Wear suitable protective clothing

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Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



### 8.4. Exposure limit values for the other components

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: amorphous solid. powder or lumps.
Colour	: Grey. white.
Odour	: odourless.
Odour threshold	: No data available
pH	: 5,76
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Very slightly soluble in n-octanol. Insoluble in cold/hot water, methanol, diethyl ether.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reactive with acids, moisture. Slightly reactive to reactive with oxidising or reducing agents, organic materials.

### 10.2. Chemical stability

Stable under normal conditions.

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According to SANS 10234:2019 and SANS 11014:2010

### 10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

### 10.4. Conditions to avoid

None known under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No data available.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Slags, ferrous metal, blast furnace (65996-69-2)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 4000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5,235 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Skin corrosion/irritation	: Causes skin irritation. pH: 5,76
Serious eye damage/irritation	: Causes serious eye damage. pH: 5,76
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.

#### CALCIUM OXIDE (1305-78-8)

STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

#### Ground granulated blast furnace slag

Viscosity, kinematic	Not applicable
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## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Not classified

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CALCIUM OXIDE (1305-78-8)	
LC50 - Fish [1]	97 ppm trout (7 hours)
LC50 - Fish [2]	240 ppm mosquito fish (24 hours)
Slags, ferrous metal, blast furnace (65996-69-2)	
LC50 - Fish [1]	> 100 g/l Test organisms (species): Leuciscus idus
LC50 - Fish [2]	> 1000 g/l Test organisms (species): Leuciscus idus
LOEC (chronic)	5000 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	1563 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

Ground granulated blast furnace slag	
Persistence and degradability	Not readily biodegradable.

### 12.3. Bioaccumulative potential

Ground granulated blast furnace slag	
Bioaccumulative potential	Not determined but expected to be low.

### 12.4. Mobility in soil

Ground granulated blast furnace slag	
Mobility in soil	No additional information available

### 12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available



## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste)	: Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1910	1910	Not applicable
14.2. Proper Shipping Name		
CALCIUM OXIDE	CALCIUM OXIDE	Calcium oxide
14.3. Transport hazard class(es)		
8	8	Not applicable
		Not applicable

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SANS	IMDG	IATA
<b>14.4. Packing group</b>		
III	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

### 14.6. Special precautions for user

#### SANS

Special provisions (SANS)	: 106
Limited quantities (SANS)	: 5 kg
Limited quantities (SANS)	: 5 kg
Packagings, large packagings and IBCs Packing instructions (SANS)	: P002, IBC03, LP02
Packagings, large packagings and IBCs Special packing instructions (SANS)	: B3
Portable tank and bulk containers instructions (SANS)	: T1
Portable tank and bulk container special provisions (SANS)	: TP33

#### IMDG

Special provisions (IMDG)	: 960
Properties and observations (IMDG)	: Not subject to the provisions of this Code but may be subject to provisions governing the transport of dangerous goods by other modes.

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

## SECTION 16: Other information

Issue date	: 06/06/2022
Revision date	: 01/07/2022
Supersedes	: 06/06/2022

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## Safety Data Sheet

According to SANS 10234:2019 and SANS 11014:2010

### Abbreviations and acronyms

: CAS-No. - Chemical Abstract Service number  
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
ATE - Acute Toxicity Estimate  
BCF - Bioconcentration factor  
BLV - Biological limit value  
BOD - Biochemical oxygen demand (BOD)  
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008  
COD - Chemical oxygen demand (COD)  
DMEL - Derived Minimal Effect level  
DNEL - Derived-No Effect Level  
EC-No. - European Community number  
EC50 - Median effective concentration  
ED - Endocrine disrupting properties  
EN - European Standard  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
IMDG - International Maritime Dangerous Goods  
IOELV - Indicative Occupational Exposure Limit Value  
LC50 - Median lethal concentration  
LD50 - Median lethal dose  
LOAEL - Lowest Observed Adverse Effect Level  
N.O.S. - Not Otherwise Specified  
NOAEC - No-Observed Adverse Effect Concentration  
NOAEL - No-Observed Adverse Effect Level  
NOEC - No-Observed Effect Concentration  
OECD - Organisation for Economic Co-operation and Development  
OEL - Occupational Exposure Limit  
PBT - Persistent Bioaccumulative Toxic  
PNEC - Predicted No-Effect Concentration  
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
SDS - Safety Data Sheet  
STP - Sewage treatment plant  
TLM - Median Tolerance Limit  
TRGS - Technical Rules for Hazardous Substances  
ThOD - Theoretical oxygen demand (ThOD)  
VOC - Volatile Organic Compounds  
WGK - Water Hazard Class  
vPvB - Very Persistent and Very Bioaccumulative

### Other information

: SDS prepared by:  
WSP UK Limited (trading as WSP)  
6 Devonshire Square  
London  
EC2M 4YE.

Full text of H-statements	
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.