

# SAFETY DATA SHEET

## Magflux

### Section 1. Identification

GHS product identifier : Magflux  
Other means of identification : None.  
Product type : Solid.

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

##### Identified uses

Additive for glass manufacturing.

Supplier's details : Blastrite (Pty) Ltd  
PO Box 5515  
Cape Town, 8000,  
South Africa  
email: sales@blastrite.co.za  
Website: www.blastrite.com

Emergency phone: : 08600 BLAST  
Tel: +27 (0)21 417 1700  
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### Section 2. Hazards identification

Classification of the substance or mixture : Not classified.

#### SANS 10234: 2007 (GHS) label elements

Signal word : No signal word.  
Hazard statements : No known significant effects or critical hazards.  
Precautionary statements  
Prevention : Not applicable.  
Response : Not applicable.  
Storage : Not applicable.  
Disposal : Not applicable.

Other hazards which do not result in classification : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

### Section 3. Composition/information on ingredients

Substance/mixture : Mixture  
Other means of identification : None.

#### CAS number/other identifiers

CAS number : Not applicable.

### Section 3. Composition/information on ingredients

EC number : Mixture.

Product code : Not available.

Ingredient name	%	CAS number
silica, crystalline - quartz	None	14808-60-7
silica, amorphous	35 - 45	7631-86-9
calcium oxide	0 - 31.4	1305-78-8
calcium silicate	0 - 31.4	1344-95-2
magnesium oxide	5 - 15	1309-48-4
aluminium oxide	5 - 15	1344-28-1
manganese oxide (mno)	<5	1344-43-0

The product will contain a complex mixture of oxides and silicates. Composition will depend on process parameters. The mineral composition of blast furnace slag generally consists of melilite ( $\text{Ca}_2\text{MgSi}_2\text{O}_7$  -  $\text{Ca}_2\text{Al}_2\text{SiO}_7$ ) and merwinite ( $\text{Ca}_3\text{MgSi}_2\text{O}_8$ ). Steelmaking slag (BOS or EAF) mainly consist of dicalciumsilicate ( $\text{Ca}_2\text{SiO}_4$ ), dicalciumferrite ( $\text{Ca}_2\text{Fe}_2\text{O}_5$ ) and wuestite ( $\text{Fe}_{1-x-y}\text{Mg}_x\text{Mn}_y\text{O}_z$ ).

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

#### Description of necessary first aid measures

- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops.
- Inhalation** : No effect when product is in its virgin state.
- If used in a process which generates dust, remove victim to fresh air and keep at rest in a position comfortable for breathing. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Skin contact** : Flush contaminated skin with plenty of water. Get medical attention if irritation develops.
- Ingestion** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : No significant irritation expected other than possible mechanical irritation.
- Inhalation** : No effect when product is in its virgin state.
- If used in a process which generates dust, no significant irritation expected other than possible mechanical irritation.
- Skin contact** : None identified.
- Ingestion** : None identified.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No effect when the product is in its virgin state.
- If used in a process which generates dust, exposure can cause coughing, chest pains and difficulty in breathing.
- Skin contact** : No specific data.

## Section 4. First aid measures

Ingestion : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No special measures required.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media : Non-flammable substance.

Unsuitable extinguishing media : Not applicable.

Specific hazards arising from the chemical : Not applicable.

Hazardous thermal decomposition products : Not applicable.

Special protective actions for fire-fighters : No special measures are required.

Special protective equipment for fire-fighters : No special protection is required.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No special measures are typically indicated.

For emergency responders : No special measures are typically indicated.

Environmental precautions : No special measures are required.

### Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

Precautions for safe handling : **If used in a process which generates dust:**  
Put on appropriate personal protective equipment (see Section 8). If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.

## Section 7. Handling and storage

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a dry, well-ventilated area, away from incompatible materials (see section 10) and food and drink.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
silica, amorphous	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 6 mg/m <sup>3</sup> (total inhalable dust) TWA: OEL:RL 3 mg/m <sup>3</sup> (respirable fraction)
calcium oxide	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 2 mg/m <sup>3</sup>
aluminium oxides	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 10 mg/m <sup>3</sup> (total inhalable dust) TWA: OEL:RL 5 mg/m <sup>3</sup> (respirable fraction)
magnesium oxide	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 5 mg/m <sup>3</sup> (total inhalable dust) TWA: OEL:RL 10 mg/m <sup>3</sup> (respirable fraction)
manganese oxide (mno)	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 5 mg/m <sup>3</sup> (Dust)
calcium silicate	<b>Occupational Health and Safety Act, 1993 (South Africa)</b> TWA: OEL:RL 5 mg/m <sup>3</sup> (total inhalable dust) TWA: OEL:RL 10 mg/m <sup>3</sup> (respirable fraction)

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to dusts.

**Hand protection** : Wear gloves if a risk assessment indicates this is necessary.

## Section 8. Exposure controls/personal protection

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : **If used in a process which generates dust:**  
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## Section 9. Physical and chemical properties

- Physical state** : Solid. [Granular solid.]
- Color** : Grayish-white.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Product does not sustain combustion.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Non-flammable.
- Lower and upper explosive (flammable) limits** : Not applicable.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : Not available.
- Solubility** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Not applicable.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Incompatible with some strong acids.
- Incompatible materials** : Strong inorganic and organic acids may release heavy metals, that are present in the grit, into the environment.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
silicon dioxide	LD50 Oral	Rat	3160 mg/kg	-

**Information on the likely routes of exposure** : Inhalation of dust.

#### Potential acute health effects

**Eye contact** : No significant irritation expected other than possible mechanical irritation.

**Inhalation** : No effect when product is in its virgin state.

If used in a process which generates dust, no significant irritation expected other than possible mechanical irritation.

**Skin contact** : None identified.

**Ingestion** : None identified.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness

**Inhalation** : No effect when the product is in its virgin state.

If used in a process which generates dust, exposure can cause coughing, chest pains and difficulty in breathing.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : No specific data.

**Potential delayed effects** : No specific data.

#### Long term exposure

**Potential immediate effects** : No specific data.

**Potential delayed effects** : No specific data.

#### Potential chronic health effects

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Oral	3635.2 mg/kg

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
calcium oxide	Chronic NOEC 100 mg/L Fresh water	Fish - Tilapia nilotica - Juvenile (Fledgling, Hatchling, Weanling) - 8.3 g	46 days

### Persistence and degradability

No specific data.

### Bioaccumulative potential

No specific data.

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : No specific data.

**Mobility** : Low mobility of hazardous heavy metal content in soil and water is expected.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	SANS 10228:2012	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

## Section 14. Transport information

## Section 15. Regulatory information

**Safety, health and environmental regulations specific for the product** : No known specific national and/or regional regulations applicable to this product (including its ingredients).

## Section 16. Other information

### History

**Date of printing** : 12/07/2024.

**Date of issue/Date of revision** : 12/07/2024.

**Date of previous issue** : 7/16/2014

**Previous Version** : 1

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
UN = United Nations

**References** : Supplier Safety Data Sheet.  
Toxnet.

✔ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.