



FIREBLOCK MSDS – Rev 2

# SAFETY DATA SHEET

according to Regulation (EU) 2015/830

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

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### 1.1 Material Identification

Fireblock Lithium Gel

### 1.2 Chemical Family

Acrylate Polymer Sodium Salt (SAP)

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

For extinguishing lithium-ion battery fires.

Uses advised against – N/A

### 1.4 Details of the supplier of the safety data sheet

#### Company name

FIREBLOCK

#### Manufacturer's information

352 Larsen Drive, Muldersdrift, Gauteng, 1746, South Africa

Telephone: +27 (0)72 952 3892

### 1.5 Emergency telephone number

+27 (0)72 952 3892

## SECTION 2: Hazards identification

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### 2.1 Classification of the substance or mixture

Classification according to Regulation 1272/2008

Gases under Pressure – H280

Eye irritation – H319

Eye damage, skin irritation – H208

Skin burns and eye damage – H315

### 2.2 Label elements

Signal word – WARNING

#### Hazard statement(s)

H280 Contains gas under pressure; may explode if heated.

H319 – Contains Magnesium Oxide (MgO). Causes serious eye irritation.

H208 – Contains Calcium Oxide (CaO). Causes serious eye damage, causes skin irritation.

H315 – Contains Potassium Oxide (K<sub>2</sub>O). Causes severe skin burns and eye damage.

#### Precautionary statement – storage



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P410+P403 Protect from sunlight. Store in a well-ventilated place.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

**Information concerning particular hazards for human and environment**

Not classified as hazardous to human health or the environment



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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Yes

#### Description

Water based gel

#### Ingredients

Name	CAS	EC No.	Proportion	Hazard Statement(s)
Nitrogen (N <sub>2</sub> ) gas propellant	7727-37-9	231-783-9	100%	H280
Potassium Polyacrylate (C <sub>3</sub> H <sub>3</sub> KO <sub>2</sub> ) <sub>n</sub>	25608-12-2	607-755-0	<1%	
Silicon Dioxide (O <sub>2</sub> Si)	7631-86-9	643-045-7	<1%	
Aluminium Oxide (Al <sub>2</sub> O <sub>3</sub> )	90669-62-8	618-619-5	<1%	
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	8011-97-0	616-935-8	<1%	
Magnesium Oxide (MgO)	1309-48-4	215-171-9	<1%	H319 Causes serious eye irritation.
Calcium Oxide (CaO)	1305-78-8	215-138-9	<1%	H318 Causes serious eye damage, H315 Causes skin irritation and may cause respiratory irritation
Potassium Oxide (K <sub>2</sub> O)	12136-45-7	235-227-6	<1%	H314 Causes severe skin burns and eye damage, and H318 Causes serious eye damage.
Titanium Dioxide (TiO <sub>2</sub> )	13463-67-7	643-044-1	<1%	
Lithium Oxide (Li <sub>2</sub> O)	12057-24-8	235-019-5	<1%	
Erythrosine	16423-68-0	240-474-8		
Tartrazine	1934-21-0	217-699-5	0.0125%	
Brilliant Blue	3844-45-9	223-339-8		
Water (H <sub>2</sub> O)	7732-18-5	686-299-4	98%	

#### Information on composition

Article containing liquid and gas propellant. Liquid: Fireblock Lithium Gel.

#### Additional supplier classification(s)

None

#### Other information

See Section 16 'Other Information'



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## **SECTION 4: First aid measures**

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### **4.1 Description of first aid measures**

#### **Inhalation**

Remove individual to fresh air.

#### **Skin**

Wash affected area with soap and water. May cause dry skin. Repeated contact may also cause slight irritation. If irritation persists, seek medical attention.

#### **Eye**

Flush with copious amounts of water for at least 15 minutes. Eyelids may become sticky.

#### **Ingestion**

If swallowed, drink large amounts of water. Seek medical attention if significant quantities have been ingested.

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

No significant hazard.

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

Seek medical attention if irritation or symptoms persist.

#### **Advice to doctor**

Treat symptomatically.

#### **First aid facilities**

Eyewash and normal washroom facilities.

#### **Other information**

For advice in an emergency, contact a Poisons Information Centre or a doctor at once.



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## SECTION 5: Firefighting measures

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### 5.1 Extinguishing media

Suitable extinguishing media: carbon dioxide, dry chemical, foam, water, or water mist – suitable for surrounding materials.

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

Contents under pressure – cylinders can explode in a fire.

Explosion data – Not explosive

Flammability – Not flammable or combustible

Special procedures – None

Flash point – Non-flammable

Auto ignition – Not applicable

### Hazardous combustion products

Under fire conditions this product may emit toxic and/or irritating fumes and gases.

### 5.3 Advice for firefighters

Water spray may be used to cool down heat-exposed containers. This product should be prevented from entering drains and watercourses.

### Decomposition temperature

Not available

## SECTION 6: Accidental release measures

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

Steps to be taken if material is spilled or released – sweep up or flush with water or diluted salt solution.

CAUTION – the surface becomes very slippery when wet.

### 6.2 Environmental precautions

Aqueous solution. Do not allow product to enter drains.

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

Aqueous solution. Absorb with inert, absorbent material to contain spill. Transfer to suitable, labelled container for disposal. Clean spillage area thoroughly with water. Do not allow product to enter drains, waterways or sewers. Dispose of waste according to applicable local and national regulations. If contamination of sewers or waterways occurs, inform the local water and waste management authorities in accordance with local regulations.

### 6.4 Reference to other sections

Refer to Section 8 & 13

## SECTION 7: Handling and storage

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### 7.1 Precautions for safe handling



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Safe to handle. Material is very slippery. Avoid repeated contact with skin.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry place. Keep container closed when not in use. Keep out of reach of children.

**Storage temperatures**

Store at a temperature between 5 °C and 60 °C.

**7.3 Specific end use(s)**

No further information available



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## SECTION 8: Exposure controls/personal protection

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### 8.1 Control parameters

#### 8.1.1 Exposure limit values

Substance	CAS No.	Exposure Limit	Notes
Magnesium Oxide (MgO)	1309-48-4	10 mg/m <sup>3</sup>	
Calcium Oxide (CaO)	1305-78-8	2 mg/m <sup>3</sup>	
Potassium Oxide (K <sub>2</sub> O)	12136-45-7	- mg/m <sup>3</sup>	

Nitrogen (N<sub>2</sub>) – none of the components have assigned exposure limits.

### 8.2 Exposure controls

#### Hand protection

Wear rubber gloves when handling for prolonged periods.

#### Eye/Face protection

Approved safety goggles, glasses with side shields. Avoid contact with eyes, nose and mouth.

#### Body protection

Suitable protective workwear, e.g. cotton overalls, are recommended.

#### Other information

Nitrogen, in high concentrations, may cause asphyxiation – see Section 4.1.

#### Environmental exposure controls

For waste disposal, see Section 13.

## SECTION 9: Physical and chemical properties

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### 9.1 Information on basic physical and chemical properties

Physical state – Water-based gel

Appearance – Gas under pressure: nitrogen gas and aqueous solution

Colour – Green

Odour – Odourless

Odour threshold – Not available

Boiling point – 1500 °C

Freezing point – 0 °C

Solubility in water – Miscible

Specific gravity (H<sub>2</sub>O=1) – 1.00 @ 20 °C

pH value – 6.5–8.5

Vapour pressure – No data available



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Evaporation rate – No data available

Flash point – Non-flammable product

Flammability – Not flammable



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## **SECTION 10: Stability and reactivity**

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### **10.1 Reactivity**

No significant hazard.

### **10.2 Chemical stability**

Stable under normal use conditions. Do not mix with any other chemical products.

### **10.3 Possibility of hazardous reactions**

None known.

## **SECTION 11: Toxicological information**

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### **11.1 Information on toxicological effects**

Not classified as hazardous to human health or the environment.

#### **Inhalation**

Wear a mask if working with large-scale quantities, as well as for dust/smoke inhalation.

#### **Ingestion**

May cause nausea and vomiting.

#### **Skin**

May cause irritation on prolonged contact.

#### **Eye**

May cause watering and redness.

## **SECTION 12: Ecological information**

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### **12.1 Toxicity**

Non-toxic

### **12.2 Persistence and degradability**

Biodegradable

### **12.3 Bioaccumulative potential**

No observed effect level. Low impact on the environment.

### **12.4 Mobility in soil**

No observed effect level.

### **12.5 Other adverse effects**

No data available

#### **Environmental protection**

Prevent this material entering waterways, drains and sewers.



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## SECTION 13: Disposal considerations

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### 13.1 Waste treatment methods

Can be disposed of as a non-toxic and inactive material. Collect spillage with a shovel and broom, or similar, and can be reused. Dissolve with salt and wash into a sandy area. Do not discharge into drains or watercourses as there is a risk of blockage. The disposal of the waste material must be done in accordance with applicable local and national regulations.

## SECTION 14: Transport information

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14.1 UN number – 1044

14.2 UN proper shipping name – Portable extinguisher (contains nitrogen gas)

14.3 Transport hazard class(es) – 2.2

14.4 Packing group – None allocated

IMDG UN no – 1044

IMDG proper shipping name – Portable extinguisher (contains nitrogen gas)

IMDG hazard class – 2.2

### 14.5 Environmental hazards

IMDG marine pollutant – No

UN number (air transport, IATA) – 1044

IATA proper shipping name – Portable extinguisher (contains nitrogen gas)

IATA hazard class – 2.2

IATA symbol – Non-flammable, non-toxic gas

14.6 Special precautions for user – Not available

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code – Not available

Other information – Hazchem Code: 2T



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## SECTION 15: Regulatory information

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### 15.1 Safety, health and environmental regulations/legislation specific to the substance or mixture

Commission Regulation (EU) No 453/2010 of 20 May 2010, amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94, as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

### 15.2 Chemical safety assessment

Not classified as hazardous. Keep out of reach of children. Wear suitable gloves and eye protection.

## SECTION 16: Other information

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### Other information

Not available

### SDS history

Created – October 2023

### References

Guidance on the compilation of Safety Data Sheets, as amended by Regulation (EU) 2015/830.

**END OF SDS**