

PYROFLOW PASSIVE FIRE SUPPRESSION GRANULES

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This product contains no hazardous material according to CLP regulations.

SECTION 1: Chemical product and company identification

1.1 Product identifier

Product name: PyroFlow Passive Fire Suppression Granules

1.2 Relevant identified usage of the material/mixture and uses that are not recommended:

Use as fire extinguishing agent and fire protection granules for Lithium Ion Batteries and Class D metal fires.

1.3 Details of the supplier of the safety data sheet

Supplier: Firechief Global

Address: 3 Lands End Way, Oakham, Rutland

Postcode / Country: LE15 6RB / United Kingdom

Telephone: +44(0) 330 999 0019

Email: sales@firechiefglobal.com

1.4 Emergency telephone number

Contact: +44(0) 330 999 0019

Language: English

Opening hours: Available Monday to Friday (not bank holidays), 8 am to 5 pm (UK time)

SECTION 2: Possible dangers

2.1 Classification of the material/mixture

No specific labelling according to Regulation (EC) No 1272/2008

2.2 Marking elements

No marking according to Regulation (EC) No 1272/2008

2.3 Other dangers

The mixture does not meet the criteria for classification as PBT or vPvB. The dust can cause irritation to the eyes and respiratory tract if the granulate structure is destroyed during improper use.

Safety note: **P262 avoid contact with your eyes, skin or clothes**

Note for medical doctor: Show this data sheet to an attending doctor.

SECTION 3: Composition/information on ingredients

3.1 Product

PyroFlow Maxi is a product according to REACH and not a raw material or mixture in the sense of a hazardous substance.

It is therefore excluded from the obligation of registration (see paragraph 15.2)

Chemical description: Non-organic, thermally expanded glass granulate on basis of post consumer recycled glass (container glass and flat glass - soda-lime-silica glass).

Ingredients	Chemical formula	mass %by weight
Silicon dioxide	SiO ₂	70 - 75
Sodium oxide	Na ₂ O	10 - 15
Calcium oxide	CaO	7 - 11
Aluminium oxide	Al ₂ O ₃	0.5 - 5
Magnesium oxide	MgO	0 - 5



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Main component (approx. 95 %)	CAS-No.	EINECS-No.
Soda-lime-silicate glass	65997-17-3, 142844-00-6	266-046-0
Subsidiary component (approx. < 5 %; from this results the Aluminium oxide content)		
Kaolin	1332-58-7	310-194-1
Index No.	Not assigned	
Additional information:	Not applicable	

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Supply fresh air immediately. If the product irritates the respiratory tract: consult a doctor.

After skin contact: Wash off with plenty of water and soap, rinse thoroughly.

After eye contact: Remove contact lenses. Rinse immediately with plenty of water for at least 15 minutes with the eyelids open. Consult an ophthalmologist if necessary.

After ingestion: Irritations in the mouth, throat and oesophagus as well as in the gastrointestinal tract are possible. Immediately rinse mouth thoroughly. Drink plenty of water (200 - 300 ml) in small sips (dilution effect). Avoid vomiting.

4.2 Most important symptoms and effects, both acute and delayed

There are no known any typical symptoms and effects.

4.3 Indication of any immediate medical attention and special treatment needed

No special measures required.

SECTION 5: Fire fighting measures

5.1 Extinguishing agent

Not applicable, product is non-flammable

5.2 Special risks of the material/mixture

No special risks caused by the product or mixture.

5.3 Information about fire fighting

The extinguishing agent should be chosen according to the primary cause of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Note to untrained emergency personnel: Use appropriate protective equipment. Ensure adequate ventilation and avoid dust. Use of a dust mask is recommended.

6.2 Measures for environmental protection

Do not allow the product to enter water courses or drains, as it will float on water due to its low density, and may cause a blockage of pipes.

6.3 Procedure to stop spillage and measures for cleaning

Remove spillage by sweeping, vacuuming or wet absorption.

Cover sewer system to prevent the material from entering the sewer system.

6.4 Reference to other sections

Observe protective measures, see paragraphs 7, 8 and 13.



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SECTION 7: Handling and storage

7.1 Notes for safe handling

Avoid the formation of dust. The usage of a particle filtered protective mask FFP2 is required if the dust concentration rises above the reference value. Avoid contact with eyes. Avoid ingestion or inhalation.

7.2 Conditions for storage, including any incompatibilities

Protect against humidity.

7.3 Specific end use(s)

Please observe all usage instructions and guidance.

Observe information documents on delivery forms, conveyance, transport options and storage. For pneumatic conveying, please observe the maximum conveying pressure of 0.8 bar.

SECTION 8: Exposure controls/personal protection

8.1 Parameters to be controlled

Exposure limits: General maximum dust emission (ASGW) according to TRGS 900

Alveolar fraction: 1.25 mg/m³ (A dust)

Exceedance factor: 8 (VIII); with an 8-fold exceedance of 1.25 mg/m³ four times per shift over 15 minutes, no further exposure must occur, as otherwise the ASGW will be exceeded.

Total fraction inhalable dust: 10 mg/m³ (E dust)

Exceedance factor: 2 (I); For a period of 15 minutes, the respective limit value may be exceeded by up to 2 times in one shift.

8.2 Limitation and controlling of the exposition

Personal protective equipment

Respiratory protection: The usage of a particle filtered protective mask FFP2 is required if the dust concentration rises above the reference AGW value.

Eye protection: Wear safety glasses with side shields or goggles to protect against eye contact.

Hand protection: Wear suitable protective gloves in order to minimize skin contact.

Body protection: Wear general purpose work protection, such as overalls in order to protect skin from irritation.

Specific hygienic measures: Not applicable

8.3 Limitation and monitoring of environmental exposure

See paragraphs 6 and 7.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

State of aggregation: Solid granulate, grain size 1.0 - 4.00 mm

Colour: Creamy white

Odour: Odourless

Safety-relevant data

Odour threshold: Not applicable

pH-value: 8 - 12 according to DIN EN ISO 787-9

Melting point/freezing point

Melting temperature: Approx. 900 °C, literature value for container glass

Initial boiling/Boiling range: Not applicable

Flash point: Non-combustible

Evaporation rate: Not applicable

Flammability (solid, gaseous): Not applicable

Upper/Lower flammability or explosion limits: Not applicable

Vapour pressure: Not applicable



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Vapour density:	Not applicable
Relative density:	
Bulk density:	In the range of 190 - 250 and 340 - 460 kg/m ³ depending on grain size, to DIN EN 1097-3
Solubility:	Insoluble in water
Distribution coefficient n-Octanol/water:	Not applicable
Autoignition temperature:	Not applicable
Decomposition temperature:	
Softening point:	Approx. 700°C according to DIN ISO 7884-6
Viscosity:	Not applicable
Explosive properties:	
Dust explosion hazard:	Not applicable
Oxidizing properties:	Not applicable
9.2 Other information	No further information

SECTION 10: Stability and reactivity

10.1 Reactivity

The product is not reactive.

10.2 Chemical stability

The product is stable under normal temperature and pressure conditions.

10.3 Possible danger reactions

When handled and stored as directed, no dangerous reactions occur.

10.4 Conditions to avoid

At temperatures above 900° C, the product starts to melt.

10.5 Incompatibility (material to avoid):

The product dissolves on contact with hydrofluoric acid to form hexafluorosilicic acid (H₂SiF₆).

10.6 Hazardous decomposition or by-products:

Not applicable

SECTION 11: Toxicological information

11.1 Information on toxicological effects

There are no toxicological reports on the product.

SECTION 12: Ecological information

12.1 Toxicity

Not applicable

12.2 Persistence and degradability

Biological nondegradable, as of mineral origin

12.3 Potential of bioaccumulation

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB evaluation

The product does not contain any substance that meets the PBT or vPvB criteria.

12.6 Further harmful effects

No data available.

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SECTION 13: Disposal considerations

13.1 Waste treatment process

Disposal via waste water is not recommended.

Dispose the product in accordance with local regulations. Consult the exact waste code with the disposal company.

Name of waste Lime-soda-silicate glass granulate

EWC code: 10 11 12 (Waste glass other than those in 10 11 11) for the product on its own.

Once the product is used it may encapsulate other materials, including those formed during combustion - these may be hazardous and should be evaluated for classification and appropriate disposal.

Packaging: Not applicable

SECTION 14: Transport information

14.1 UN number

Not relevant

14.2 UN proper shipping name

Not relevant

14.3 Transport hazard class(es)

Not relevant

14.4 Packing group

Not relevant

14.5 Environmental hazards

Not relevant

14.6 Special precautions for user

Protect from humidity; maximum pneumatic conveying pressure: 0.8 bar

14.7 Bulk commodity transport in accordance with appendix II of the MARPOL Convention and according to the IBC-Code:

Not relevant

SECTION 15: Regulatory information

15.1 Instructions for safety, health and environmental protection/specific legislation for the material or mixture:

Labelling in accordance to EG-guidelines

Danger symbol: No labelling required

Danger defining components: Not applicable

R-phrases: Not applicable

S-phrases: S 24/25 avoid contact with eyes and skin

Special identification of certain preparations: Not applicable

German national guidelines

Classification according to „StörfallVO“: Not applicable

Classification according to „VBF“: Not applicable

Classification according to „TA-Luft“: Not applicable

Water pollution classification: Not hazardous to water, according to VwVwS appendix 3 No. 5 paragraph b

Resorption by Skin/Sensitizing: No data available

15.2 Chemical safety assessment

This product is exempt from the REACH-Registration obligation according to Regulation (EC) No. 1907/2006 appendix V.11 by amending Regulation No. 987/2008 of 8 October 2008.



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SECTION 16: Other information

This product is a non-hazardous substance according to the CLP regulations, therefore this is a voluntary Safety Data Sheet (SDS). The details are based on the current state of our knowledge and serve to describe the product with regard to the applicable safety regulations.

They do not represent any assurance of product properties and do not give reasons for any contractual legal relationship. Users must themselves decide on the suitability of this information for their particular purposes.

Statement on REACH Regulation for PyroFlow Passive

According to Regulation No. 987/2008 of 08.10.2008 amending the REACH Regulation with regard to appendixes IV and V, glass is exempted from the registration requirement.

This means that the glass type on which PyroFlow is based is also exempt from registration.

During production, PyroFlow is given a specific shape, surface and design which determines its function to a greater extent than its chemical composition. It is therefore a product which is not registered according to REACH.

For this reason, the product PyroFlow is not subject to registration.

The information given on this Safety Data Sheet is to the best of Firechief Globals' knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users' responsibility to satisfy themselves as to the suitability and completeness of the information for their own particular use.

For more information contact: Firechief Global, 3 Lands End Way, Oakham, Rutland, UK, LE15 6RB | Imported into EU by: Sentura Group (Ireland) Ltd, Joyce House, 21-23 Holles Street, Dublin 2, Ireland



+44 (0) 330 999 0019



sales@firechiefglobal.com



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