

## Mineral Fibre Sheet

Pyroplex<sup>®</sup> Mineral Fibre Sheet has been specifically designed for use in fire resistant doorset assemblies, essential ironmongery such as locks, latches and concealed door closing devices. The product is supplied in two thicknesses 0.5mm and 1.0mm. When exposed to elevated temperatures, the product is designed to expand multidirectionally filling cavities and voids to provide a fire resistant barrier. The product is derived from a cellulose pulp incorporating expandable graphite with additional silicate fibres acting to aid char stability. When exposed to elevated temperatures, the material will expand up to 20:1 of its original volume producing a high resistant char.

### FIELD OF APPLICATION

Pyroplex<sup>®</sup> Mineral Fibre Sheet can be used in the following applications:

- **Architectural fire resistant door protection:**  
Can provide a simple and concealed protection for associated door hardware. During a fire situation, the heat generated is conducted through the hardware, which if not protected could lead to integrity and insulation failure.
- **Electrical protection:**  
Used for protection for electrical installations, typically includes electrical box protection and conduit systems and can be die cut for down-lighters.
- **Panel products:**  
Can be used for applications including panelling systems for upgrading of specialist fire doors, where the intumescent has been laminated to the core of the door and lined with a finish facing, to provide insulation of the core in a fire situation.

### PRODUCT FEATURES

- Multidirectional expansion
- Stable and durable char providing a thermal barrier
- Easy to cut, fold and die stamp for shapes
- Supplied on a roll

### PRODUCT DATA

Part No.	Dimensions (thickness x width)	Roll length
PMFS1	0.5mm x 1000mm	50m
PMFS2	1.0mm x 1000mm	50m

### EXPANSION CHARACTERISTICS

Pyroplex<sup>®</sup> Mineral Fibre Sheet exhibits the following characteristics when exposed to elevated temperatures:

Thickness	0.5mm	1.0mm
Typical Expansion Factor	20:1	10:1
Activation Temperature	200°C	200°C

### PACKAGING INFORMATION

Pyroplex<sup>®</sup> Mineral Fibre Sheet is supplied in 0.5mm and 1.0mm thicknesses, in 50m rolls with a standard 1m width.

### QUALITY APPROVAL

Pyroplex Limited have a Quality Management System that meets the requirements of ISO 9001 and an Environmental Management System that meets the requirements of ISO 14001, both are independently verified by BSI Quality Assurance under Certificate Numbers FM 10371 and EMS 637894. Copies of these certificates are available on our website to download at [www.pyroplex.com](http://www.pyroplex.com).

### OTHER INFORMATION

The information contained herein is based upon the present state of our knowledge. Recipients of Pyroplex<sup>®</sup> products must take responsibility for observing existing laws and regulations.

Due to our policy of continuous improvement, Pyroplex Limited reserves the right to amend specifications without prior notice.

## TECHNICAL DATA:

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**Expansion characteristics:** The intumescent material exhibits an expansion factor of up to 20:1 ratio when exposed to elevated temperatures. During the heating phase, the material expands multi directionally and forms a solid char which provides a seal to maintain insulation and integrity to restrict the passage of fire.

Thickness	0.5mm	1.0mm
Typical density	327kg/m <sup>3</sup>	325kg/m <sup>3</sup>
Tensile strength	14 N/15mm	12 N/15mm

### MAINTENANCE AND INSTALLATION RECORDS

As this product is not subject to routine and replacement programmes, Pyroplex Limited recommend that all firestopping materials are checked on a regular basis to ensure that the product remains integral. Replace and fit any damaged components to reinstate the fire resistance.

### PRODUCT GUARANTEE

Providing the product is installed in accordance with the requirements of the guidance document, the product is guaranteed for a period of 10 years.

### TECHNICAL SUPPORT AND GUIDANCE

Should you require any further information regarding this product, please contact Pyroplex Limited or visit our website, [www.pyroplex.com](http://www.pyroplex.com)

## MATERIAL SAFETY DATA:

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

#### 1.1 Product name: Pyroplex® Mineral Fibre Sheet

Product Reference PMFS1 – 0.5mm sheet

Product Reference PMFS2 – 1.0mm sheet

#### 1.2 Intended Use: Pyroplex Mineral Fibre sheet has been specifically designed for use in fire resistant doorset assemblies, essential ironmongery such as locks, latches and concealed door closing devices. The product is supplied in two thicknesses 0.5mm and 1.0mm.

#### 1.3 Supplier of the safety data sheet:

Pyroplex Limited

The Furlong,

Droitwich,

Worcestershire, WR9 9BG,

United Kingdom

Phone: +44 (0)1905 795432

Fax: +44 (0)1905 796662

Email: [info@pyroplex.com](mailto:info@pyroplex.com)

[www.pyroplex.com](http://www.pyroplex.com)

### SECTION 2: HAZARDS IDENTIFICATION

#### Hazard Statements

None for the non-woven products (manufactured articles) covered by this MSDS.

None for dust and fibres released during handling.

Cutting through the material and surface scuffing may release small amounts of glass or mineral wool fibres or particulates and carbon dust which are mechanically irritant to skin, eyes and upper respiratory system.

As with any dust, pre-existing upper respiratory and lung diseases may be aggravated.

Under the European chemicals Regulation 1907/2006 REACH the non-woven products listed in Section 1 above are considered to be articles - see Chapter 2, Art. 3 - Definitions, Para 3. These materials do not contain any substances of very high concern or substances intended to be released under normal foreseeable conditions of use.

Under Regulation 1907/2006 REACH Safety Data Sheets are only required for hazardous substances and mixtures/preparations; there is no legal obligation to supply Safety Data Sheets for the non-woven products.

Despite this the supplier has decided to provide its customers with information regarding the safe use and handling of the products listed above by means of this Material Safety Data Sheet.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### PMFS1 Pyroplex® Mineral Fibre Sheet 0.5mm

Substance	CAS/EC No.	% By weight	Classification and Labelling Regulation EC 1272/2008	Classification and Labelling Directive 67/548/EEC
Mineral Wool	287922-11-6	20-50	Not classified	Not classified
Chopped Strand Glass Fibre	65997-17-3	4.5-40	Article - Not classified	Not classified
Exfoliating Graphite	7782-42-5 / 231-995-3	10-40	Not classified	Not classified
Polymeric Binder	N/A - Polymer	2.5-40	Not classified	Not classified

### PMFS2 Pyroplex® Mineral Fibre Sheet 1.0mm

Substance	CAS/EC No.	% By weight	Classification and Labelling Regulation EC 1272/2008	Classification and Labelling Directive 67/548/EEC
Mineral Wool	287922-11-6	20-85	Not classified	Not classified
Exfoliating Graphite	7782-42-5 / 231-995-3	4.0-60	Not classified	Not classified
Polymeric Binder and Self Adhesive coating	N/A - Polymer	5.0-30	Not Classified	Not classified

Man-made vitreous silicate fibres of random orientations with alkaline oxide and alkali earth oxides ( $\text{Na}_2\text{O} + \text{K}_2\text{O} + \text{CaO} + \text{MgO} + \text{BaO}$ ) content greater than 18% by weight and fulfilling one of the Note Q conditions for increased bio-solubility.

Mineral wool fibres satisfying the Note Q conditions for increased bio-stability are not classified as carcinogenic according to Directive 97/69/EC and Regulation EC 1272/2008 (page 335 of the JOCE L353 of 31 Dec 2008)

Self-adhesive products are supplied faced on one side with a release paper.

## SECTION 4: FIRST AID MEASURES

**Skin Contact:** Rinse affected areas with water and wash gently with soap. Do not use detergent.

**Eye Contact:** Flush eyes with large quantities of water. Have eye bath readily available in areas where eye contact may occur. Seek medical attention if irritation continues.

**Ingestion:** Drink plenty of water. Seek medical advice.

**Inhalation:** Remove to fresh air, clear throat and blow nose to evacuate dust and fibre, drink water. Seek medical attention if symptoms persist.

## SECTION 5: FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Use extinguishing agent suitable for type of surrounding combustible materials. Do not inhale the products of combustion.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Do not allow dust to be windblown.

Do not use compressed air to blow dust or fibres.

Unwanted product should be collected and stored in sealed bags.

Dust and fibre deposits should be collected using a suitable vacuum cleaner with HEPA exhaust air filtration.

Collected deposits and used vacuum bags should be sealed into poly-grabs before disposal.

If sweeping is necessary the area should be thoroughly damped down with water before sweeping starts to prevent dust or fibres becoming airborne during sweeping.

## SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:** Keep dust generation to a minimum.

**Precautions for safe storage:** Store dry and cool. Keep sealed in original wrapping until required for use.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Applicable Workplace Exposure Limits** (from UK HSE EH40/2005-second edition 2011);

**Machine made mineral fibre (excluding Refectory Ceramic Fibre and Special Purpose fibre):** 2.0 fibres/millilitre & 5 mg/m<sup>3</sup> (both 8hr TWA)

**Fine Carbon Dust:** 3.5 mg/m<sup>3</sup> (8hr TWA) and 7.0 mg/m<sup>3</sup> (15 minute reference period)

**RESPIRATORY PROTECTION:** Use local exhaust ventilation (extraction) where available. If workplace exposures exceed the exposure limit wear disposal dust mask to EN149:2001 – FFP2 minimum

**HAND PROTECTION:** The use of disposable nitrile rubber gloves is recommended.

**EYE PROTECTION:** Wear goggles or safety glasses with side shields. Do not wear contact lenses.

**SKIN PROTECTION:** Wear overalls that are loose fitting at the neck and wrists. Wash overalls separately from other clothing.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Product Reference: PMFS1

Appearance	Pale green-grey fibrous paper
Thickness	0.5mm in thickness
Density	240-490 kg/m <sup>3</sup>
Expansion	Rapid volumetric expansion occurs when the product is heated above 200°C
Flammability	Material will sustain combustion for a short period until organic binder is burnt out or the resulting self expansion self-extinguishes.

### Product Reference: PMFS2

Appearance	Pale green-grey fibrous paper
Thickness	1.0mm in thickness
Density	240-490 kg/m <sup>3</sup>
Expansion	Rapid volumetric expansion occurs when the product is heated above 200°C
Flammability	Material will sustain combustion for a short period until organic binder is burnt out or the resulting self expansion self-extinguishes.

## SECTION 10: STABILITY AND REACTIVITY

### Stability/Conditions to avoid:

Stable

### Materials to avoid:

Strong oxidising agents, strong alkalis, and hydrochloric acid, concentrated mineral acids and bases

### Hazardous decomposition products:

Decomposition of the polymeric binder will occur at temperatures above 200°C releasing smoke H<sub>2</sub>O, CO, CO<sub>2</sub> and hydrocarbons. At temperatures above 200°C the graphite will expand creating a thermally insulating char.

### Hazardous Polymerisation:

Will not occur

## SECTION 11: TOXICOLOGICAL INFORMATION

### Mineral wool fibre:

Coarse Fibres:

In common with other man-made mineral fibres the mineral wool fibres in this product are mechanical irritants which may result in temporary irritation of the throat, eyes or skin.

Respirable Fibres:

The mineral fibres in this product include fibres which are less than 3.0 µm diameter and greater than 5.0 µm long which are classed as respirable (WHO definition).

Animal Studies:

Short term inhalation studies of rats exposed to high levels of stone wool fibres have shown that the long fibres are biodegradable and quickly disappear from the lungs.

Human Epidemiological studies:

Large morbidity and mortality studies of both European and North American mineral wool manufacturing workers have been conducted with traditional mineral wools.

The studies found no significant evidence of non-malignant lung disease (e.g. fibrosis). The studies did not establish a causal relationship between exposure to traditional mineral wools and malignant diseases (lung cancer or mesothelioma).

The particular mineral wool fibre used in the products covered by this SDS is based on a formulation with increased bio-solubility giving even more rapid clearance of fibres from the lungs compared with traditional mineral wools.

### Chopped strand glass fibre:

There are no known chronic health effects connected with long term use or contact with continuous filament glass fibre.

The evidence from human and animal studies was evaluated by the International Agency for Research on Cancer (IARC) as insufficient to classify continuous filament glass fibre as a possible, probable or confirmed cancer causing material.

In 1987 (IARC) has classified continuous filament glass fibre as "not classifiable with respect to human carcinogenicity (Group 3)"

The chopped strand glass in these products are to a diameter to be classed as respirable.

### Graphite:

Powdered graphite is non-toxic.

High levels of airborne graphite dust may be a mechanical eye irritant.

Skin contact with graphite dusts may cause temporary irritation due to mechanical effects; repeated prolonged exposures may lead to dermatitis.

Airborne graphite dust is an upper respiratory irritant; exposures may aggravate pre-existing upper respiratory and lung diseases. Cases of pneumoconiosis, pulmonary fibrosis and emphysema have been reported in workers following prolonged exposures to high levels of airborne graphite dust.

**Polymeric Binder:**

The polymeric binder and SAB coating is considered to be non-hazardous.

**SECTION 12: ECOLOGICAL INFORMATION**

This product will remain stable over time with the inorganic components remaining inert.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste is not classified as a hazardous waste and may be disposed of at a normal licensed industrial waste site. Local regulations should be considered. Waste should be bagged or suitably contained for disposal to prevent any dust or fibres being windblown during disposal.

**SECTION 14: TRANSPORT INFORMATION**

Not regulated for transport. Ensure that dust is not wind blown during transportation

**SECTION 15: REGULATORY INFORMATION**

**Product Hazard Classification according to Directive 67/548 EEC:**

Not Classified

**Product Hazard Classification according to Regulation EC 1272/2008:**

Article – not classified

**SECTION 16: OTHER INFORMATION**

Further information regarding working with man-made mineral fibres and measurement techniques may be obtained by referring to Guidance Note EH46 1990 and MDHS59 1988 published by the UK, Health & Safety Executive.

This information only concerns the above named product(s) and may not be valid if used with other product(s) or for uses other than those described in Section I. This information is to our best knowledge, correct and complete but no guarantee can be given. It remains the responsibility of the user to make sure that the information is appropriate and complete for their particular use of the product.