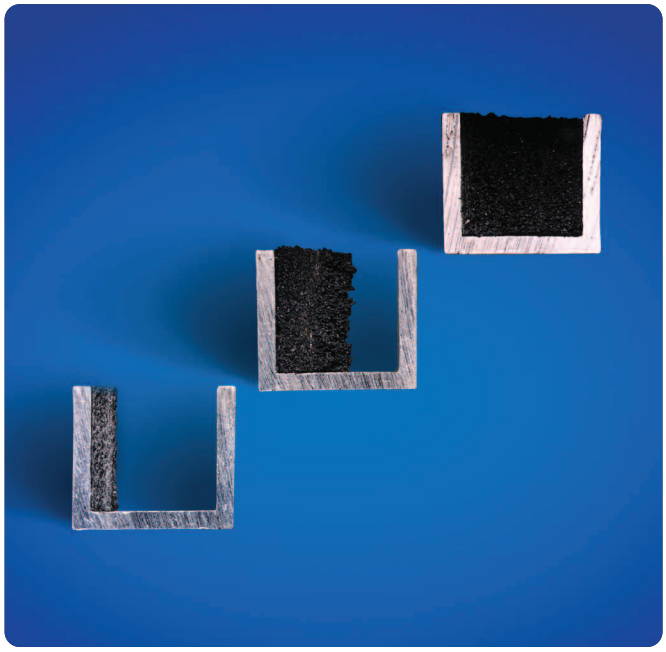
Data sheet

ENGLISH

Superwool® Plus Expanding Paper



Description

Superwool® Plus Expanding Paper is a thin, flexible material that expands on heat exposure to provide thermal insulation and fire protection when exposed to fire or heat.

The expansion ratio can be engineered within the range of: 3:1 to 12:1 to suit application requirements. The expansion property results from the use of stabilised graphite within the paper manufactured using Thermal Ceramics low biopersistence Superwool® fibres to provide a range of refractory and thermal insulation performance.

Typical activation temperature: >190°C (374°F) with a measured expansion at 450°C (842°F).

Density: Typically from 240kg/m³ to 320kg/m³ ±10%

Features

- Products are completely flexible
- Available in rolls, sheets, narrow spools or gaskets
- Good thermal properties
- Unidirectional expansion
- Range of expansion ratio can be engineered between 3:1 to 12:1
- Thicknesses from 1mm to 3mm

Benefits

- Non toxic
- Low smoke
- Extremely stable when exposed to temperatures from ambient up to 1100°C (2012°F)
- The wide range of expansion ratios allows flexibility in choice of product suitable for the exact requirement of the end use application

Applications

The product is normally incorporated into engineered fire-rated components to provide a sealing function during fire exposure. Typical end-use applications are:

- Glazing screens
- Pipe wraps
- Fire doors industrial
- Fire rated services
- Fire rated grills
- Fire rated electrical boxes / down lights
- Fire rated air conditioning units

Data sheet

Superwool® Plus Expanding Paper

Availability and packaging
Supplied in 1000mm wide rolls in cartons
Non-standard widths are available
Can also be supplied in sheets, spools and cut pieces (gaskets)

Definition:
IMF = Intumescent Mineral Fibre
IMG = Intumescent Glass Fibre
ISW = Intumescent Superwool Plus Fibre

Grade											
Thickness mm	IMG20	IMG43	IMG52	IMG72	IMF33	IMF50	IMF51	IMF52	IMF53	ISW30	ISW31
0.5		✓	✓								
0.65				✓							
1.0				✓		✓	✓	✓	✓	✓	✓
1.5							✓	✓	✓		
1.8					✓		✓	✓	✓		
2.0	✓		✓	✓		✓	✓	✓	✓	✓	✓
2.5							✓	✓	✓		
3.0						✓	✓	✓	✓	✓	✓
3.6					✓						
4.0						✓	✓	✓	✓	✓	✓
4.2									✓		
5.0						✓	✓	✓	✓	✓	✓

*IMF33 only available in standard sheet 1200mm x 1000mm

Expansion ratio by product										
IMG20	IMG43	IMG52	IMG72	IMF33	IMF50	IMF51	IMF52	IMF53	ISW30	ISW31
4.5:1	20:1	9:1	11:1	14:1	6:1	8:1	10:1	12:1	8:1	12:1

Typical density kg/m³ by product										
IMG20	IMG43	IMG52	IMG72	IMF33	IMF50	IMF51	IMF52	IMF53	ISW30	ISW31
210	330	220	350	380	260	290	320	340	290	320

There is no European Standard Test method published to measure unilateral expansion, however each batch is tested to stringent internal tests and procedures with a certificate of conformity available upon request.

The following tests have been carried out in accordance with: EN 13501 – 1
EN ISO 13823 Spread of flame (B1-s1,d0)
EN 11925-2 Ignitibility (B1-s1,d0) IMO MSC 307 (88) Annex Part 2 Smoke and Toxicity
For further information, please contact your local sales office

The values given herein are typical values obtained in accordance with accepted test methods and are subject to normal manufacturing variations.
They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes.
Check with your Thermal Ceramics office to obtain current information.

Contact

Europe:
Telephone:
+44 (0) 151 334 4030

E-mail:
marketing.tc@morganplc.com

North America:
Telephone:
+1 (706) 796 4200

E-mail:
northamerica.tc@morganplc.com

South America:
Telephone:
+54 (11) 4373 4439

E-mail:
marketing.tc@morganplc.com

Asia:
Telephone:
+65 6595 0000

E-mail:
asia.mc@morganplc.com