

# K-Stop® Pressure Exerting Graphite Mastic

## Technical Data Sheet

### Description

Kingspan K-Stop® Pressure Exerting Graphite Mastic is a high specification formulation designed to prevent the spread of fire, smoke and gases through openings in fire rated walls and floors. K-Stop® Pressure Exerting Graphite Mastic expands when it is subjected to fire and closes openings around penetrations when any combustible or low temperature melting materials have burnt away.

K-Stop® Pressure Exerting Graphite Mastic is designed to fire seal difficult services which traditional fire rated mastics do not achieve such as large plastic pipes.

K-Stop® Pressure Exerting Graphite Mastic can be used with a suitable filling material, i.e. stone wool, in order to ensure correct width to depth ratio and to reduce the shrinking of the sealant during curing. Minimum depth and maximum width of the joints are included in the installation instructions. When activated, the material will expand (intumesce) and prevent the passage of fire and smoke for periods up to 4 hours depending on application.



### General Properties

- Classified in most constructions for plastic pipes and cables.
- May be used in combination with Kingspan K-Stop® Coated Batt; see product installation guide for details.
- Easy to apply.
- No priming necessary for application to most materials; see the installation instructions for further details.
- Suitable for most surfaces, included concrete, bricks, Leca, steel, wood, gypsum, glass, PVC and most non-porous surfaces.
- Hardens quickly, tack free after 1 hour.
- The fire performance specification of the joint filler has been derived when the joint filler has been allowed to cure for 30 days.
- Minimum 12 months storage time.
- 25 years working life.

# K-Stop® Pressure Exerting Graphite Mastic

## Emission Data (Indoor Air Quality)

Compound	Emission Rate After 4 Weeks
TVOC	< 5 µg/m³
Formaldehyde	< 3 µg/m³
Carcinogenic	< 1 µg/m³

NB n.d. or < means not detected.

Regulation or Protocol	Conclusion
French VOC Regulation	Pass / A+
French CMR Components	Pass
German AgBB (2021)/ABG (2022)	Pass
Italian CAM Edilizia	Pass
Belgian Regulation	Pass
EMICODE	Pass / EC 1 <sup>PLUS</sup>
Blue Angel (DE-UZ 132)	Pass
BREEAM International	Pass / Exemplary Level
BREEAM-NOR	Pass / Exemplary Level
LEED-EU (v4.1) BETA	Pass

K-Stop® Pressure Exerting Graphite Mastic has been tested by Eurofins Product Testing; reports available upon request.

## Pipe End Configurations

When testing pipes, one can choose not to cap (or close) the pipe, or cap the pipe inside the furnace, or outside the furnace, or on both sides. The configuration chosen depends on the intended application of the pipe and/or the installation environment. The code defining if a pipe is capped is stated after the fire classification. For instance, EI 60 C/U which means the pipe was capped inside the furnace, and uncapped outside the furnace. The test configuration defines the approvals possible.

Our engineering judgement based on BS EN 1366-3: 2021\* (Fire resistance tests for service installations. Penetration seals) are:

Intended Use of Pipe	Pipe End Condition <sup>3)</sup>
Rainwater pipe, plastic	At drainage U/U <sup>1)</sup>
	Not at drainage C/C <sup>2)</sup>
	Ventilated drain C/U <sup>1)</sup>
Drainage or sewage pipe, plastic	Unventilated drain U/C <sup>2)</sup>
	Drain w/water trap U/C <sup>1)</sup>
	Not at drainage C/C <sup>2)</sup>
Metal or plastic pipe in closed system (water, gas, air etc.)	C/C <sup>1)</sup>
Metal pipe in ventilated system (sewage etc.)	U/C <sup>1)</sup>
Flue gas recovery system pipe, plastic	U/C <sup>1)</sup>
Pipe with open ends and ≥ 50cm length on both sides, plastic	U/U <sup>2)</sup>
Waste disposal shaft pipe, metal	U/C <sup>2)</sup>

<sup>1)</sup> Stated in BS EN 1366-3: 2021\*.

<sup>2)</sup> Kingspan's judgment based on tests.

<sup>3)</sup> U/U classified fire seals cover C/U, U/C and C/C. C/U classified fire seals cover U/C and C/C. U/C classified fire seals cover C/C.

\* And all previous editions.

# K-Stop® Pressure Exerting Graphite Mastic

## Technical Data

Condition	Ready for use, water based graphite filler
Specific Gravity	1.50 – 1.60
pH	8.00 – 9.50
Reaction to Fire	Class B-s1, d0
Flash Point	None
Expansion Rate	Approx. 1 : 25
Non-sticky	60 minutes
Film Forming	30 minutes
Totally Hardened	3 to 5 days depending on thickness
Durability / Service	Class Z2
Thermal Conduct	0.85 W/mK (+/- 3%) @ 20 mm depth
Storage	12 months stored in unopened cartridges. To be stored in temperatures between 5 °C and 30 °C.
Working Life	25 years
Service Temperature	-15 °C to +75 °C
Application Temperature	+4 °C to +30 °C
Compatibility	Suitable for use with most materials. Should not be used in direct contact with bitumen
Limitations	Should not be used in permanently damp areas or in joints with excessive movement, joints at floor level or joints below the ground
Classification	CE-marked - Sealant for fire rated penetrations class EI 240 depending on application
Colour	Dark grey (may grow darker during curing)
Packaging	Box containing 25 cartridges each 310 ml Box containing 25 foil packed each 300 ml

## Air Permeability

Positive Pressure (Pa)	Leakage (m³/h/m²)	Negative Pressure (Pa)	Leakage (m³/h/m²)
25	0.00	25	0.00
50	0.00	50	0.00
100	0.00	100	0.00
200	0.00	200	0.00
300	0.00	300	0.56
450	0.83	450	1.67
600	3.61	600	3.33

## Installation

Please refer to the K-Stop® Pressure Exerting Graphite Mastic installation guide, available to download from [www.kingspanpassivefireprotection.co.uk](http://www.kingspanpassivefireprotection.co.uk).

# Contact Details

## Great Britain

**Kingspan Technical Insulation Ltd**  
Harvey Road | Burnt Mills Industrial Estate  
Basildon | SS13 1QJ

T: +44 (0) 1524 388 898  
E: sales.pfp@kingspan.com  
[www.kingspanpassivefireprotection.co.uk](http://www.kingspanpassivefireprotection.co.uk)

For individual department contact details please visit  
[www.kingspantechnicalinsulation.co.uk/contacts](http://www.kingspantechnicalinsulation.co.uk/contacts)

## Ireland

**Kingspan Insulation Ltd**  
Castleblayney | County Monaghan

T: +353 (0) 42 975 4219  
E: sales.pfp@kingspan.com  
[www.kingspantechnicalinsulation.ie](http://www.kingspantechnicalinsulation.ie)



Technical Data Sheet to  
ETA 23/0796  
0843-UKTA-23 0013



To check that you have the latest version of this brochure please visit  
[www.kingspanpassivefireprotection.co.uk](http://www.kingspanpassivefireprotection.co.uk) or scan the QR code directly above.

To access pre-existing product information or information relating to previously sold/discontinued products please email [info.kti@kingspan.com](mailto:info.kti@kingspan.com).

The information contained in this brochure is believed to be correct at the date of publication. Kingspan Technical Insulation Limited ("Kingspan Technical Insulation") reserves the right to alter or amend the product specifications without notice due to continuous improvement commitments. There may also be relevant changes between publications with regard to legislation, or other developments affecting the accuracy of the information contained in this brochure. Product thicknesses shown in this document should not be taken as being available ex-stock and reference should be made to the current Kingspan Technical Insulation price-list or advice sought from Kingspan Technical Insulation's Customer Service Department. The information, technical details and fixing instructions etc. included in this literature are given in good faith and apply to uses described. Kingspan Technical Insulation does not accept responsibility for issues arising from using products in applications different from those described within this brochure or failure to correctly follow the information or instructions as described within this brochure. Recommendations for use should be verified with a suitable expert or professional for suitability and compliance with actual requirements, specifications and any applicable laws and regulations. For other applications or conditions of use, Kingspan Technical Insulation offers a technical advisory service (see above for contact details), the advice of which should be sought for uses of Kingspan Technical Insulation products that are not specifically described herein. Please check that your copy of this literature is current by contacting the Kingspan Technical Insulation Marketing Department.

© Kingspan, K-Stop and the Lion Device are Registered Trademarks of the Kingspan Group plc in the UK, Ireland and other countries. All rights reserved.

Registered in England and Wales, No. 05571822. Registered Office: Harvey Road, Burnt Mills Industrial Estate, Basildon, SS13 1QJ, England. VAT GB872003452.

Registered in Ireland, No. 54621. Registered Office: Bree Industrial Estate, Castleblayney, Co. Monaghan, Ireland. VAT IE45750691.

