



Fire Protection Products

3M™ Fire Barrier Expantrol Flexible Intumescent Strip (E-FIS)

Technical Data Sheet

July / 2020

Product Description

3M™ Fire Barrier Expantrol Flexible Intumescent Strip has been designed to seal the air space between doors, frames and for glazing fire-resistant glass to help prevent the passage of smoke and flames in the event of a fire. When exposed to a heat source, the material expands to seal the gap and forms a char to deter the spread of fire. The intumescent properties of the material help prevent noxious gasses, flames or other by-products that may be produced in a fire from penetrating into adjacent areas.

Product Features

- Intumescent – Expands when exposed to heat creating a seal between objects
- Smoke seal – retards spread of toxic by-products of combustion
- Superior aging properties
- Flexible
- Simple, cost effective installation
- Versatile – can be cut to fit irregular shapes
- Re-enterable. No special tools required
- Low odor
- High quality adhesive backing

Applications

3M™ Fire Barrier E-FIS provides a cost-effective seal for doors, frames, safes and glass where fire resistance is necessary. Its unique intumescent action expands in a fire to seal and prevent the passage of flames and smoke. Its excellent flexibility and adhesive backing conforms to various shapes and applications, providing easy of installation and versatility.

3M™ Fire Barrier E-FIS can be used on wood or metallic surfaces. The excellent adhesion properties on E-FIS allows application even on slightly oily metallic surfaces.

Specifications

3M™ Fire Barrier E-FIS is tested according to the following standards:

- ASTM D-412-83, ASTM E84-94, ASTM C 518
- DIN 4102 Teil 1, DIN 50017, DIN 50018, DIN 50021

For available sizes, check with your 3M representative.

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Performance and Typical Physical Properties	Colors Available	Black
	Unit	50 ft. (15.24 m.) Rolls. Width and Thickness may vary. Check with your 3M representative
	Surface Burning Characteristics (ASTM E 84)	Flame Spread: 0 Smoke Developed Index: 25
	Hardness	81 Shore A average, 3M/TP-75
	Tensile Strength (ASTM D 412-83)	>280 psi
	Elongation at Break (ASTM D 412-83)	>900%
	Intumescent Activation	Expansion sequence begins 392°F (200°C) Significant expansion 536°F (280°C) Multidirectional free expansion 10x Size (average)
	Service Temperature	-40°F to 350°F (-35°C to 176°C)
	Thermal Conductivity (ASTM C 518)*	0.042 W/m°C @ 47°C (2.9 BTU-in/hr/ft²/°F @ 117°F) 0.041 W/m°C @ 66°C (2.8 BTU-in/hr/ft²/°F @ 151°F) 0.041 W/m°C @ 86°C (2.8 BTU-in/hr/ft²/°F @ 187°F)
	*Calculated based on a 1/8in. (3mm) thick sheet	

Installation Techniques	<p>Equipment: 3M™ Fire Barrier E-FIS may be applied by hand entirely, scissors or a knife may be used for cutting material.</p> <p>Preparatory Work: For optimal adhesion, surfaces must be clean and frost free. Cut material to desired length.</p> <p>Installation Details: Apply 3M™ Fire Barrier E-FIS by hand.</p> <p>Limitations: It is recommended that 3M™ Fire Barrier E-FIS is applied when the product is at a temperature between 40°F (4°C) and 110°F (43°C). It is recommended that 3M™ Fire Barrier E-FIS be applied when the ambient air temperature is 32°F (0°C) or higher.</p>
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Maintenance	No maintenance is expected to be required when installed in accordance with the 3M™ Fire Barrier E-FIS Installation Guide. Once installed, if any section of the 3M™ Fire Barrier E-FIS is damaged, the following procedure will apply: Any damaged product must be cut out and removed. The open area created must then be filled with new product.
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Storage and Shelf Life	<p>3M™ Fire Barrier E-FIS should be stored indoors in dry conditions. It is recommended that the product remains in heated storage above 40°F (4°C) prior to installing material.</p> <p>3M™ Fire Barrier E-FIS shelf life is indefinite when stored indoor in dry conditions above 40°F (4°C) and below 100°F (38°C).</p> <p>Lot numbering (e.g. 017316): First three digits = Last three digits of year manufactured (017316 = 2017), fourth to sixth digit = Julian Date (017316 = 316th day of year 2017, November 12, 2017).</p>
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Availability	Available from 3M Authorized Fire Protection Products Distributors. For additional technical and purchasing information, call 1-800-328-1687 or visit 3M.com/firestop .
Safe Handling	Consult Safety Data Sheet prior to handling and disposing of 3M™ Fire Barrier E-FIS.
Technical Information	The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.
Product Use	Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.
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