



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

Equipment: 3M™ Fire Barrier E-FIS may be applied by hand entirely, scissors or a knife may be used for cutting material.

Preparatory Work: For optimal adhesion, surfaces must be clean and frost free. Cut material to desired length.

Installation Details: Apply 3M™ Fire Barrier E-FIS by hand.

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.

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.

Storage and Shelf Life

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.

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).

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).

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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.
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