



Fire Protection Products

3M™ Fire Barrier Electrical Box Insert (EBI)

Technical Data Sheet

June / 2024

Product Description

3M™ Fire Barrier Electrical Box Insert (EBI) is designed to help prevent the spread of fire in 1 and 2 hour rated gypsum wall assemblies when penetrated with metallic electrical boxes in the event of a fire. When exposed to a heat source, the material expands to seal the airspace inside the box 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 spreading into adjacent areas. The EBI is designed for both new construction and retrofit applications where the drywall has already been installed. The flexible feature of the product allows for ease of installation even if the mud ring and existing wiring are present.

Product Features

- Firestop tested up to two hours in accordance with UL 1479
- Pre-cut slits for easy access to wiring during installation
- Great for both retro fit and new construction applications
- Intumescent – Expands up to 100x in volume when exposed to heat
- Superior aging properties
- Flexible
- Simple, cost effective installation
- Full-sided adhesive backing

Applications

3M™ Fire Barrier Electrical Box Insert provides a simple, easy to install product to protect metallic electrical boxes where fire resistance is necessary. Its intumescent action expands in a fire to seal and prevent the passage of flames and smoke. Its excellent flexibility, pre-cut slits and adhesive backing allow for installation even after wires and receptacles are installed, providing ease of installation and versatility for both new construction and retrofit applications.

3M™ Fire Barrier Electrical Box Inserts can be used to restore 1 or 2-hour rated wall assemblies that have been penetrated with metallic electrical boxes. Boxes may be installed less than 24 inches on center and for boxes in back-to-back configurations. Refer to the UL CLIV.R9700 listing for further certification details.

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Specifications

3M™ Fire Barrier Electrical Box Inserts (EBI) shall be a one component, ready-to-use, intumescent pad capable of expanding 100 times in volume at 1000°F. The material shall be applicable to metallic electrical box firestopping without the need for additional firestopping materials or stud cavity insulation. Under normal conditions, 3M™ Fire Electrical Box Insert (EBI) shall be noncorrosive to metal and compatible with synthetic cable jackets. The insert shall be listed by independent test agencies such as UL, Intertek or FM. 3M™ Fire Barrier Electrical Box Insert (EBI) shall be tested to and pass the criteria of UL 1479 Standard Test Method for Fire Tests of Penetration Firestop Systems and CAN/ULC S115 Standard Method of Fire Tests of Firestop Systems. 3M™ Fire Barrier Electrical Box Inserts meet the requirements of the IBC, NFPA 5000, NEC (NFPA 70), NFPA 101 and NBC (Canada) Building Codes.

For technical support relating to 3M™ Fire Protection Products and Systems, call: 1-800-328-1687.

For more information on 3M™ Fire Protection Products, visit: www.3M.com/firestop

Performance and Typical Physical Properties

Color	Red with black core and red and black label	
Nominal Thickness	3/16 in. (5 mm)	
Surface Burning Characteristics (ASTM E84)	Flame Spread: 0	Smoke Developed Index: 0
STC (ASTM E90 and ASTM E 413): Tested in STC 62 rated wall assembly	62 when tested on back-to-back metallic electrical boxes in certain configurations	
Intumescent Activation	Expansion sequence begins	392°F (200°C)
	Significant expansion	437°F (225°C)
	Multidirectional free expansion	100x Volume (average)
EBI-4		
Dimensions:	3.25 in. x 3.25 in. x 0.1875 in. (8.3 cm x 8.3 cm x 0.5 cm)	
Unit Volume:	1.98 in. ³ (32,45 cm ³)	
Unit Weight:	1.24 oz (35,13g)	
EBI-5		
Dimensions:	3.75 in. x 3.75 in. x 0.1875 in. (9.5 cm x 9.5 cm x 0.5 cm)	
Unit Volume:	2.64 in. ³ (43,21 cm ³)	
Unit Weight:	1.65 oz (46,77g)	

Installation Techniques

Equipment: 3M™ Fire Barrier Electrical Box Insert EBI can be applied by hand entirely, without the need for additional hand tools or power tools.

Preparatory Work: For optimal adhesion, surfaces must be clean and frost free.

Installation Details: Apply 3M™ Fire Barrier EBI by hand.

1. Peel off liner to expose the adhesive on the back side of the insert
2. Feed wiring through pre-cut slits or route around the insert and position

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the insert to fit onto the interior back face of the box.

3. Press the insert to secure onto the back of the box.*

*Due to the size of the insert, the entire back face of the box will not be covered. This is acceptable as long as the volume of the pad is installed as required by the 3rd party listing.

Limitations: It is recommended that 3M™ Fire Barrier EBI 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 EBI 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 EBI Installation Guide. Once installed, if the 3M™ Fire Barrier EBI is damaged such that material is missing, the following procedure will apply: the entire damaged EBI product must be removed and replaced. If the 3M™ Fire Barrier EBI is damaged, but no portion of the insert is missing, such as a tear in the insert, the product can remain in place.

Storage and Shelf Life

3M™ Fire Barrier EBI 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 EBI 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. C132493176): First two characters = Manufacturing identification, third character = last digit of the manufactured year, fourth to sixth digits = Julian Date, last four digits = secondary production information. (C132493176 = manufactured at C1, on September 6, 2023 using material from batch 3176)

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 EBI.

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.
