

Thickness of cable tray wall penetration sealing

Article Overview

The required sealing thickness for cable tray wall penetrations depends on the fire rating, cable type, and sealing system, typically ranging from 3 mm for coatings to 120 mm for intumescent pillows.

Fire-Rated Coatings

For soft penetration seals using mineral wool and fire-retardant coatings, such as PROMASTOP(R)-CC, the coating thickness varies by cable group and conduit type. Metal conduits, which conduct heat efficiently, require a thicker coating, for example, 3 mm dry film thickness instead of 1 mm for standard cables, to achieve proper insulation and fire resistance . The overall cross-section of the seal can be up to 3.75 m² in walls and floors, allowing large cable tray penetrations to maintain fire compartmentation .

Intumescent Fireproof Pillows

Intumescent pillows, such as AF BAGS, provide a sealing depth of 120 mm for cables up to 21 mm in diameter, suitable for walls, floors, and sandwich structures . These pillows expand under heat to fill gaps and maintain fire resistance up to EI 240 (EN 1366-3). The number and size of pillows are selected based on the cable tray dimensions to ensure complete closure of the penetration .

Firestop Packs and Mineral Wool

For larger openings or mixed penetrations, firestop packs or mineral wool are used. The packing thickness should not be less than 24 cm, and gaps between packs and cables should not exceed 1 cm² to ensure a reliable seal . Metal trunking and cable bundles must be sealed both internally and externally, often requiring a backing plate for large openings .

Practical Considerations

- o Cable type and configuration: Different cable groups require different sealing thicknesses. Plastic conduits may need additional coating to compensate for melting during fire .
- o Wall or floor thickness: Ensure the seal spans the full penetration depth.
- o Maintenance access: Systems like intumescent pillows allow repositioning for cable changes without compromising fire protection .
- o Standards compliance: Follow EN 1366-3 for testing and EN 13501-2 for classification . In summary, sealing thickness ranges from a few millimeters for coatings to over 100 mm for intumescent pillows or mineral wool packs, depending on the cable type, penetration size, and required fire rating. Proper selection ensures both fire safety and maintainability of cable tray penetrations.

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365 Fire Protection Sealant to be filled between cables, in voids between cables and 260 Fire

Don't allow slack cable in the vicinity of a penetration. This is particularly critical in floor installations. If the firestop has

The frame can be opened and closed repeatedly to allow for cable maintenance and additions. The sponge rubber pads are

Up to 6 in. by 24 in. steel or aluminum cable tray with max. 45% cable fill F-Rating: 2 h; T-Rating: 0 h Max.

The product is certified for "small" - "medium" and "large" cable penetrations, to create a fireproof seal for cables with a diameter of

Outdoor: Hot-dip galvanized or stainless steel trays. Corrosive/High Humidity: Aluminum alloy or fiberglass

Multi-cable and Cable-tray Firestop Penetrations CSD FIRSTO firestops are designed to seal multi-cable and cable tray

FIRSTO firestops are designed to seal multi-cable and cable tray penetrations of fire-rated walls and floors. FIRSTO fire stops are

Cable penetration seal up to EI 120 for rigid walls, rigid floors and flexible walls. Through penetration

The gap area between firestop packs and cables should not exceed 1 cm², and the packing thickness should be not

1. measure the cable tray dimensions (width) and choose the size and number of pillows needed to

This video shows how TWRAP can be used for the insulation of cable tray penetrations in

Roxtec cable and pipe seals for walls and floors in power distribution. Ensure safety and protection with certified sealing solutions.

3M Fire Barrier Moldable Putty+ is a one-part, halogen-free product designed to firestop electrical outlet boxes and a wide variety of

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A cable tray with (11) 500MCM 15kV cables (shown on the ground in the picture) will pass through an outdoor concrete firewall via a

They are a combination of mineral wool of a specific bulk density and thickness and a fire

Web: <https://www.millstraining.co.za>

