

Cable trays penetrating walls require fireproof sealing

Article Overview

Cable tray penetrations through walls must be sealed with fire-resistant materials to prevent fire and smoke spread, using methods compliant with EN standards and building regulations.

Importance of Fireproof Sealing

Cable trays, electrical cables, and data lines passing through walls create potential fire paths. In a fire, cables can melt, leaving openings that allow flames and smoke to spread. Copper cables can also conduct heat, increasing fire risk. Proper fireproof sealing ensures compartmentalization, maintaining the integrity of fire-rated walls and protecting both property and personnel .

Materials for Fireproof Sealing

Several materials are commonly used for sealing cable tray penetrations:

- o Firestop boards and panels: Rigid boards or rock wool panels that can be cut to fit around cable trays, providing high fire resistance .
- o Firestop packs and pillows: Intumescent or ablative pillows (e.g., AF BAGS) expand under heat to seal gaps, suitable for small to large cable penetrations, and certified up to EI 240 .
- o Firestop mastic and sealants: Acrylic or graphite-based sealants for single cables or small bundles, ETA-approved and tested to EN standards .
- o Mineral wool with sealant: Combines thermal insulation with fire-resistant sealing for larger openings .

Installation Guidelines

- o Prepare the opening: Ensure wall finishes are complete and the shaft or wall opening is clean and free of debris .
- o Install backing or support: For large openings, use a fire-resistant backing plate to support the sealing material .
- o Apply fireproof material: Place firestop packs, pillows, or boards around the cable tray. Ensure all gaps are sealed, with no voids exceeding 1 cm² .
- o Seal around metal trays: Gaps inside and around metal trunking must be sealed both internally and externally .
- o Cover and finish: Use cover plates or panels to close the opening neatly, ensuring consistent dimensions and even painting if required .
- o Maintain accessibility: Firestop pillows and modular systems allow repositioning for maintenance or cable modifications .

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Fire Ratings and Standards

- o Fireproof sealing must match or exceed the fire resistance of the wall, typically 1 hour or more .
- o Products should comply with EN 1366-3 or equivalent national standards, with ETA approvals where applicable .
- o Intumescent systems like AF BAGS can provide EI 120-240 protection depending on wall thickness and cable size .

Best Practices

- o Use modular or intumescent systems for flexibility and easier maintenance.
- o Ensure proper packing density and sequence of firestop materials to avoid gaps.
- o Regularly inspect and maintain fireproof seals, especially in high-risk areas like electrical shafts or industrial facilities .
- o Consult technical teams or product manufacturers to select the appropriate sealant or pillow for specific cable diameters and wall types . By following these guidelines, cable tray penetrations can be effectively fireproofed, maintaining wall integrity and complying with fire safety regulations.

In our modern world, cabling needs are no longer limited to simple two-pair telephone wiring and 12-3 Romex type cable. The cable

Penetration seals, also known as service penetration seals, are passive fire protection systems designed to maintain the fire

Common materials for a fire-rated wall type include layers of gypsum board, concrete, or concrete blocks. Common

Firestopping through concrete barriers, installing wall boxes and using cable trays are the most common problems in this area.

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

Firestopping is an often misunderstood construction practice. This article examines what firestopping is and why it's necessary in

The most common solution for the fire protection of cable trays penetrating walls is to wrap

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When cable trays pass through walls or floors, seal openings using fire-rated penetration sealing materials.

Where cables pass through shafts, walls, slabs, or enter electrical panels or cabinets, openings shall be tightly sealed

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

Seal cable penetrations with our modular firestop solutions, designed to create water-, smoke- and gas-tight barriers in energy and

Learn how fire rating cable penetrations must be sealed to maintain FRLs and meet AS 1530.4, AS 4072.1

Maintaining them will be expensive and time consuming. In many areas on the west coast, there are seismic considerations when a

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

Wall thickness of the pipe Type of construction; wall or floor Thickness of the construction Size and shape of the aperture in the

Fire stopping around cables. Learn about materials, methods and regulations to maintain

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