

Article Overview

Fire-retardant partitions (fire sections or fire-blocking sections) are essential for isolating cable trays to prevent fire spread, using materials like firestop packs, intumescent caulks, mineral wool, and mechanical firestop devices.

Purpose and Importance

Fire-retardant partitions, also known as fire sections or fire-blocking sections, are installed along cable trays to effectively isolate fires, prevent fire propagation, and ensure safe operation of power and industrial facilities. They are critical in high-risk environments such as substations, industrial plants, hospitals, and high-rise buildings, where cable fires can compromise safety and continuity of operations . These partitions also enhance the disaster resilience of electrical infrastructure and reduce potential property damage and casualties .

Materials Used

Common materials for fire-retardant partitions include:

- o Firestop packs and pillows: Moldable, UL-listed products like 3M Fire Barrier Moldable Putty+ can seal openings around cable trays and conform to irregular shapes .
- o Intumescent caulks: Latex or water-based caulks expand under heat to seal gaps and prevent fire and smoke spread, such as IC 15WB Caulk .
- o Fire-rated boards and mineral wool: Provide structural fire resistance and are often used in combination with mechanical devices .
- o Mechanical firestop devices: Systems like EZ-Path grommets allow easy installation around individual or bundled cables without sealants, providing up to two hours of fire resistance .
- o Fire protection coatings and tapes: Products like FLAMMOTECT-A and DG-CR 0.7 form a protective shield around cables, preventing flame propagation and maintaining cable functionality during a fire .

Installation Guidelines

- o Placement: Fire partitions should be installed at regular intervals along cable trays, especially near wall or slab penetrations, control rooms, or distribution devices .
- o Sealing: All gaps around cables and trays must be tightly sealed, with no visible cracks or voids. For large openings, a fire-resistant backing plate should be installed before sealing .
- o Thickness and spacing: Firestop packs should maintain a minimum thickness (e.g., 24 cm) and gaps between packs and cables should not exceed 1 cm² .



Fire-resistant and flame-retardant partition for cable trays

o Retrofit and maintenance: Many firestop systems, including mechanical devices and moldable putty, allow for easy retrofitting and reuse when adding or removing cables .

Compliance and Ratings

o Fire-retardant partitions must comply with UL-listed systems and local fire codes, providing specified F-ratings (fire resistance) and T-ratings (temperature rise) depending on wall or slab type .

o Typical ratings include 3-hour F-rating for concrete walls and 1-2 hour F-rating for gypsum walls, ensuring adequate protection in case of fire .

Summary

Implementing fire-retardant partitions along cable trays is a critical safety measure. Using a combination of firestop packs, intumescent caulks, mineral wool, and mechanical devices, and following proper installation guidelines ensures fire isolation, regulatory compliance, and operational safety in industrial and commercial electrical installations .

It outlines the requirements that all cables and associated trunking, conduits or cable trays should, wherever possible, be securely

Cablofil fire resistant and fire proof cable trays are increasingly specified in the construction, power, oil, gas, petrochem, rail and

These standards define the test conditions to verify that the system, made up of fire resistant trays,

These fire-resistant cable trays, although less expensive, do not provide adequate

Fireproof cable trays play a crucial role in modern electrical systems. They provide robust support for cables while

Cable trays are intended for the construction of fire-resistant cable paths. Do you need help with your

Fire-resistant trays must be made from non-combustible or flame-retardant materials such as: Galvanized

For large openings, install a fire-resistant backing plate before sealing. Layout and positioning must be reasonable to

The following charts give the number of 3M pillows needed to completely firestop an opening that cable tray

Fire-resistant and flame-retardant partition for cable trays

passes through.* Two

The DIN cable tray standard specified that the entire cable tray system must be tested in an oven which is at least 3 metres long for a

Our 4-hour fire rated cable encasements provide comprehensive fire and blast protection, shielding cables from fire and containing

Sinisi Solutions works with major utilities and clients to design cable enclosures that protect critical cabling and cable tray setups

Use this product in new construction or update your fire protection in a renovation - the optional mounting bracket opens easily

Fire-resistant trunking and cable trays are specifically engineered to withstand high temperatures and prevent the spread of flames.

Learn how fire protection for cable trays enhances industrial safety by preventing fire hazards in critical areas and

110C Fireblok Conduit Sleeve Fire resistant sleeve to protect cable conduits passing through walls

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