TREMCO
Construction Products Group

Fire stopping in data centres: a critical line of defence for your infrastructure

Data centres are the core of today's digital infrastructure, supporting everything from cloud platforms to critical business services. Given their dense concentration of servers, cabling, and electrical systems, fire poses a serious threat – not just to physical assets, but to the continuity and security of operations and invaluable data. That's why *passive fire protection*, and in particular *fire stopping*, is a fundamental part of any data centre's design and construction.

The importance of compartmentation in fire safety

Data centres consist of numerous technical zones, including server halls, cable risers, and equipment rooms – all of which are interconnected. The nature of this design means that a single spark can jeopardise the integrity of an entire facility unless properly contained.

Central to effective fire protection is the concept of *compartmentation*: the division of a building into fire-resistant zones that prevent fire, smoke, and heat from spreading. However, this strategy only works if every penetration like cable trays, pipes, joints, and structural gaps, are properly sealed. That's where Nullifire provides proven, high-performance solutions, tailored to the complex needs of data centres.

With products like the FB750 Coated Batt, FS702 Acrylic Sealant, and FJ204 Fire Resistant Rope, Tremco CPG offers a comprehensive range of solutions to seal linear joints and restore wall integrity at every vulnerable point within a construction.

Sealing service penetrations

One of the most common risk areas is service penetrations, where cables or pipes pass through walls and floors. This is where solutions such as intumescent fire collars and prefabricated systems like the FZ100 Fire Safe Zone come into play. The FZ100 Fire Safe Zone is a prefabricated modular system specifically designed for

this task. It simplifies installation, ensures consistency in quality, and is compliant with EN 1366-3 standards – ideal for high-density, high-risk zones.

Treating linear joints

Linear joints – the spaces between walls, ceilings, and structural elements – present another challenge. These joints must be fire-resistant while still allowing for natural building movement. Nullifire offers advanced solutions such as FS704 hybrid sealants or FJ204 fire ropes. This treatment ensures that linear voids don't become uncontrolled pathways in the event of a fire, supporting safe evacuation and infrastructure protection.

Protecting large or irregular openings

For larger or irregular openings, such as those used for cable bundles or ducts, Nullifire offers coated batts and firestop blankets that can seal gaps up to 300 mm wide. This performance can be achieved even when up to 50% structural movement is expected. These solutions are often used in combination with sealants to provide complete protection at complex junctions.

Technology for long-term safety and compliance

To support long-term safety and compliance, many of Nullifire's products include Optifire® technology, a unique pigment system that enables visual identification of fire stopping materials even years after installation. This ensures traceability, simplifies inspections, and supports documentation – crucial to regulated environments like data centres.

Benefits of early integration in design

Integrating fire stopping into the design phase of a project brings major advantages. It reduces errors during construction, speeds up installation, lowers long-term maintenance costs, and ensures full compliance from day one.

Nullifire supports this process with expert consultation, detailed technical documentation, and certified product systems.