Introduction to cable fire stopping
Effects of major fire damage on businesses

- 23% fully operational again after one year
- 28% out of business within one year
- 43% never operational again
- 6% are sold or merged
Industry experts agree that combinations of active and passive fire protection measures are the best way forward.
FIRESTOPPING PRINCIPLES

Buildings are broken down into fire resistant cells constructed from fire compartment walls and floors.

Each of these must contain a fire for a specified period of time.
If one of these cells is penetrated e.g.

• Pipes
• Doors
• Cables

The integrity of the cell must be reinstated to its original state.

Thus preventing spread of fire and smoke
How Fast Does Smoke Travel?

Consider this:

- A square room 20 ft x 20 ft x 20 ft has a pencil hole between compartments.
- How long will it take for the smoke to fill the room to a thickness such that you cannot see your hands 18 inches in front of you?
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20 ft x 20 ft x 20 ft room

Pencil Hole

3 minutes
40 seconds
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THIS HAS MANY BENEFITS:

• Allows time for safe evacuation of people
• Allows fire services to work safely and efficiently
• Reduces damage to contents
• Reduces rebuild costs
• Reduces business down time
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The electrical, data and telecoms contractors are increasingly being given responsibility to fire stop their installations.
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Legislation, regulations and best practice guidelines now cover all types of buildings.

Not just commercial and new build but also domestic and refurb/upgrade works.
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BS8492:2009
When you penetrate through any compartment wall a ‘fit for purpose’ firestopping product must be installed.
It is the contractor’s responsibility to make sure that this is done.
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FIRE AND YOUR LEGAL LIABILITY

2006 produced the highest UK peace time fire losses of all time, rising over the previous year by 19% to a record £1.3bn. That’s why we must all play our part.

Why is this of relevance to me?

If you are involved in provision of a fire protection package, at any level, then you share liability for its usefulness and its operation when it’s needed in fire, and that liability will still be there in the event of a court case.

I place the order; it is not my responsibility to install the works!

If it is your responsibility to specify the materials and/or appoint the installation contractor, it is also your responsibility to ensure that they can prove competency for the fire protection materials used, or the works to be carried out. It’s no longer simply a duty of care or voluntary – it’s a legal obligation.

If you knowingly ignore advice that leads to a failure in the fire performance of any element of installed fire protection within a building, then you are likely to be found to be just as culpable as the deficient installer.

You share liability for the provision of information required under Building Regulation 188 that tells the user of the building about the fire prevention measures provided in the building. Otherwise, the user cannot make an effective risk assessment under the Regulatory Reform (Fire Safety) Order 2006.

What is expected of me?

In the event of fire, and deaths, a court will want to know how every fire protection system was selected, the basis for selection of the installer, whether adequate time was provided for its installation, and whether there was adequate liaison between the different parties to ensure it was installed correctly. No ifs, no buts – it’s all contained in the Construction, Design and Management Regulations 2007.

The CDM 2007 regulations, enforced by Health and Safety Executive concentrate on managing the risk, and the health and safety of all those who build, those that use the building, those who maintain it and those that demolish it - cradle to grave.

Be aware – the time to consider the above is before the event, not after it!
Firestopping products are subject to independent fire testing at third party fire stations.

- BS476 Part 20
- EN1366-3
- An Intumescent pillow fire test at BRE - Before
4 hours later
Test laboratories do not police the use of claims made by manufacturers of firestopping materials.

Third party schemes which review test data and carry out factory audits, clearly define the limitations of a product.
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How do I select a fit for purpose product?

Key questions:

Fire rating?

Wall or floor?

What is it made from? E.g. Masonry or dry wall

What cable management system is being used and what is it made from (steel or plastic)?

What is the size of the hole around the CMS?

What is the extent of the cable fill within my CMS?
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- HANDBOOK TO APPROVED FIRESTOPPING FOR MOD JOINT SERVICES COMMUNICATIONS WORKS
- DRAFT
- APRIL 2006 EDITION
- Written by: Duncan Alabaster of PFC Corofil
- Verified by BRE Fire Certification
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Looking ahead!

Cable management Fire stop Systems allow flexibility for future cable installations with transit points in fire compartments
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Reducing your liability - Record keeping

- Keep records of what products were used, where and when they were installed.
- On new build, where firestopping can be fragmented between trades, record the items that you weren’t responsible for.
- Clearly label firestops, giving contact details for future clarification on resealing if penetrated.
- In occupied buildings, introduction of permit to work schemes reduce risk of penetrating fire compartments by:
  - Increasing cabling contractor awareness of fire stops.
  - Keeping records of who is working where and at what time.
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Workmanship Issues

Education

Training installers to increase awareness of the importance of firestop seals and the need to reinstate the barrier’s integrity
Where possible, reduce liabilities to a minimum by appointing a 3rd party accredited fire stop contractor
Summary for successful firestopping

- Ask yourself the key ‘fit for purpose’ questions
- Ask the manufacturer if their product fulfils your requirements
- Reduce your liability by sourcing a third party certificated product
- Keep accurate records including labelling firestops about what, where and when you installed firestops
- Keep records what you were not asked to firestop
- Education – Make sure your installers are made aware of the importance of maintaining fire seal’s integrity
- Reduce your liability further by using a third party accredited specialist fire stopping contractor, if commercially possible.
Questions?