Promat

PRESERVE & PROTECT

8 MISTAKES TO AVOID FOR RELIABLE FIRESTOPPING

etex inspiring ways of living

Firestopping is often the most critical part of a passive fire protection project. Once the load-bearing structure of the building has been protected and firesafe compartments have been installed, everything is set for a building that can save lives in case of fire. Or is it?

The reliability of the full fire protection solution will ultimately depend on the quality of the installation of the firestopping system. If you know how to avoid these 8 common mistakes, you are heading for a perfect fire stopping protection of the critical services running through your building.

After a contractor has finished with the fire protection of the partitions, ceilings and floors that constitute a firesafe compartment, the building still needs firestopping to become fire safe. With every penetration made by a plumber or electrician through an existing fire-rated compartment a hole, gaps, joints or cavity is created though which fire can spread to a neighbouring compartment. Only if penetrations or gaps are properly sealed with approved fire sealants, collars or coatings, the fire will remain within the fire compartment and not destroy other parts of the building.

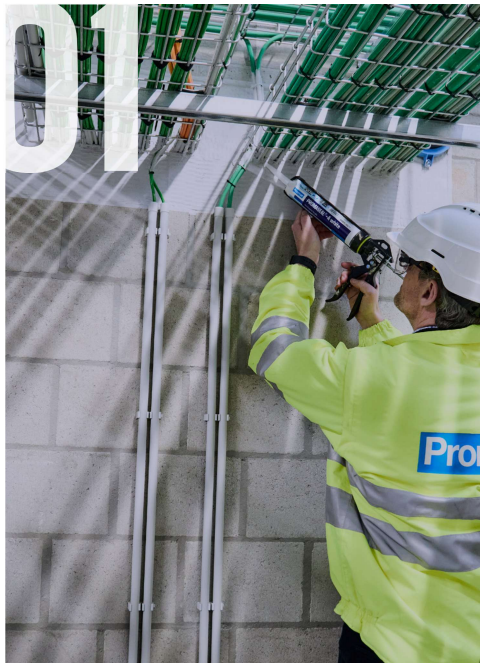
Bear in mind that every service installation reacts differently in case of fire. A PVC pipe used by a plumber for a sanitary installation will behave totally different from a set of electric cables on a cable tray. Firestopping can never be a one-size-fits-all system, solution or product that protects any kind of service installations. This explains why you need to select from such a broad range of Promat firestopping products, each tested for a specific use.

You can make your life so much easier by using the Promat Selector app on your laptop, tablet or smartphone.

You can try out the Promat Selector here and find exactly the product you need.

Promat only supplies fire stopping products that comply with all the local legal requirements in your market. On top, we make sure that our systems perform much better than the basic regulatory requirements. We do this to ensure that our firestopping products and systems will live up to their promise in real fire situations.

Fire tests and classification reports are industrial property, with some details and information treated as non-public. The owner is not obliged to show these documents to the customer. However, the fact that these reports are validated by an official independent third party means they have 100% credibility.

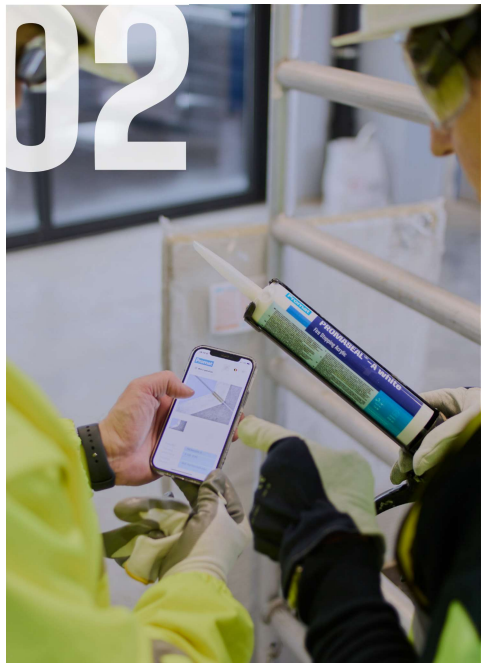


Mind the Annular Gap

The **annular gap** or space is the clearance between the penetrating material (e.g. cables, cable trays, or pipes) and the inside edge of the penetration opening. The clearance depends on the size and shape of the opening and the penetrating material. Make sure the annular gap and dimension of the opening is not too large compared your chosen penetration seal system.

As a general rule you could follow the guideline that **no more than 60% of the opening should be filled**, if not tested differently by the manufacturer. If the clearance between the opening and the penetration material is larger or narrower than tested (as reported in official approvals), the fire stopping system will probably not perform as it should, which will result in fire or smoke spreading through the gaps.

Remember that the space between the side of the opening in the partition and the penetrating material needs to be filled **with a tested fire sealant system, according to specific test approvals**. Always carefully follow the instructions of the manufacturer of the system or attend a training session to make sure you make the right choice and install it well. Some countries only allow trained persons to install firestopping materials as a safety measure.



Never use the wrong firestopping product

Every type of electrical cable, metal or plastic pipe performs differently in case of fire. That is why every firestopping product is developed and tested for a specific type of penetrating material, in a specific partition or ceiling. Never use a product that is not designed for your particular application.

A product approved for plastic pipe penetrations will not create a safe firestop for a metal pipe penetration. It is important to use the exactly the correct firestopping solution to secure your penetration. The wrong material will put lives at risk and make all the fire compartmentation work useless.

Avoid mistakes and use the Promat Selector to find exactly what you need. The Selector will guide you step-by-step to the correct firestopping product.

Watch out for non-certified firestopping products

Untested products are unreliable and fail to perform as intended or as claimed by the manufacturer. In EU-countries you need to make sure you install 'fire protective products' which carry the CE marking for the intended use. Such products are based upon a harmonized European Standard (EN), if available, or a European Technical Assessment (ETA). This shows that fire tests have been assessed and approved by a certified body, the quality control process is constantly monitored, and the durability of the products is declared and controlled by a third party.

Every product with a CE marking is accompanied by a **Declaration of Performance** (DoP), which lists the essential performance properties linked to the product. Fire properties and performances described in the Declaration are a summary of the classification report based on tests and the Extended field of Application (EXAP), if applicable. Moreover, the DoP contains important information about the constancy of the performance of the product (AVCP). A DoP document gives you everything you need to comply with local legal requirements in Europe and contains vital information about the products for the rest of the world. Besides the DoP, the supplier of the product needs to provide the **installation guidelines** and the **safety data sheet** of the product in the local language. For other regions: ensure compatibility with local test standards and building regulations.

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Avoid incorrect installation

A fire stop is as good as its installation. Incorrect or poor installation of firestopping products is the most common cause of firestopping failure. Some installers can be tempted to get the job done quickly or cheaply, which puts lives and the entire building at risk. Make sure to carefully follow the instructions since even slight deviations might weaken the fire-rating ability. When installed poorly or incorrectly, even the best products will nor perform as intended. All firestopping products are approved and certified by specialised institutions based on the controlled manufacturing process and the correct installation. Make sure the installation is done by trained and certified professionals and that the training is done by the product manufacturer.

You can check out the training offer in one of the Promat training centres or attend a session at a Promat distributor. Contact us to find out how we can get your people up to date.

To help you manage your fire stopping projects with often a range of different products, we have created the Promat Reporter app. If you register on the MyPromat platform, you can create your own project and brief the installers on the jobsite. You even get a final report with all the pictures and legal documents to share with your client.

Never compromise on firestopping

Fire stopping is essential for reliable fire protection. Unfortunately, fire authorities often discover during job site visits that fire stropping is simply 'forgotten'. A desire to cut costs or a lack of knowledge about firestopping regulations and installation can create a real fire risk. In many cases, a lack of communication between contractors and sub-contractors results in a building that invites a fire to spread and destroy everything on its track.

All buildings that need fire-rated walls or ceilings are subject to strict rules which include fire stopping for any service that runs through them. Designers, engineers and specifiers should define the right firestopping systems from the start in the project planning and documentation. There are many products, systems and solutions to choose from, this is why associations or manufacturers like Promat invest so much time and energy in high-quality training. A perfect fire stopping shows that the entire project is well managed from start to finish and will guarantee the users of the building and its owners can rest assured.

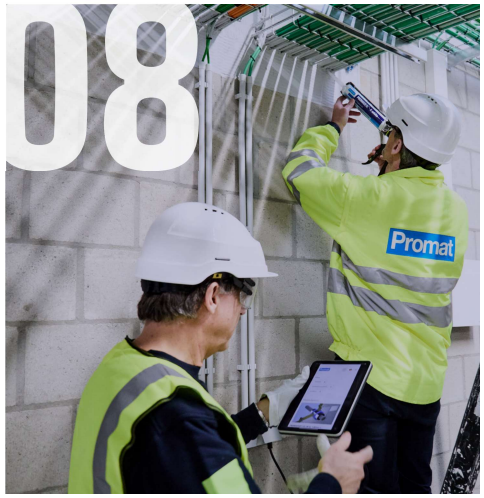
Promat provides installation videos for each fire stopping product. Each video shows you the tools you need and the perfect installation method for a reliable system. You can find the tutorial videos here.

Never mix different brands

Do not mix products or systems from different manufacturers. Every manufacturer develops and supplies products that serve a specific firestopping purpose and meet a certain fire rating. To mix products of different brands is asking for trouble. The products are usually not tested and lack a common Declaration of Performance, fire test or classification report, and should therefore not be installed. Promat offers a full range of firestopping products for any type of penetration. What is more, our firestopping products are designed by fire safety experts who, appreciating all the risks of fire, understand passive fire protection and compartmentation. We provide high-quality fire protection boards for fire compartmentation and test our fire stopping products with these boards to duplicate real natural fires. If you combine Promat boards with Promat fire stopping systems, you reach the highest grade of fire protection in the market.

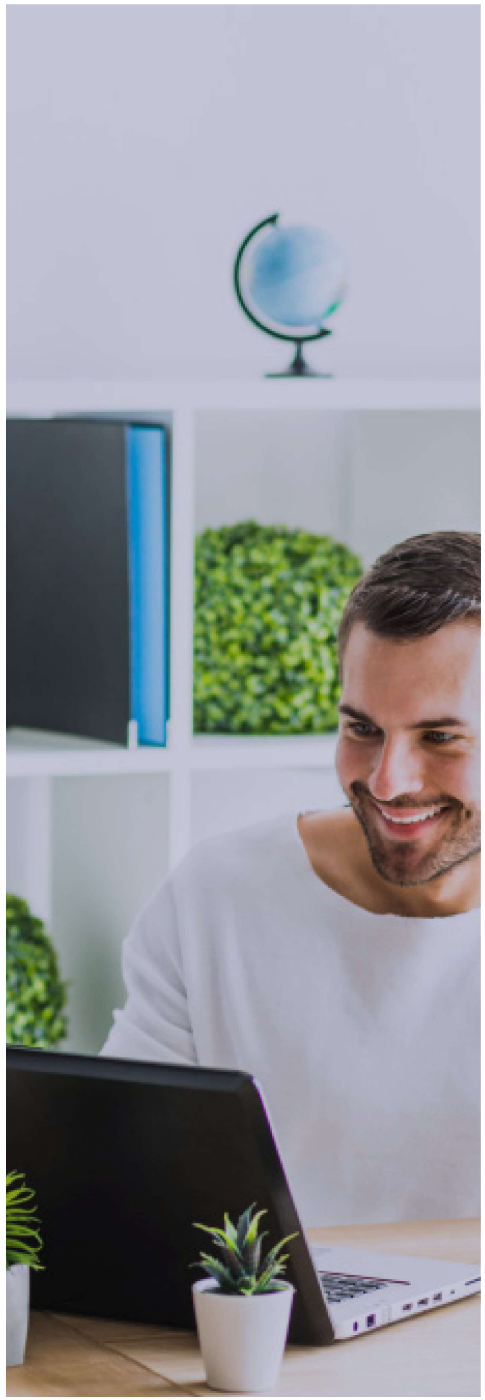
Be careful when you use mineral wool

Most fire-resistant penetration seals, joints, and gaps typically involve openings filled with mineral wool with a **melting point over 1000°C**. Each gap should be sealed with special firestopping sealants to prevent the potential spread of fire and smoke at one or both ends of the wall or floor. During the installation of mineral wool, you may encounter problems such as incorrect density or quality of the material used, which leads to a weakening of the fire resistance capabilities of the system during a fire. Another common problem when mineral wool is inserted is incorrect compression during the installation due to wrong instructions or calculations, which cause a reduction of the system's fire resistance. **There are other systems available that do not involve the use of mineral wool**, and these should be taken into consideration because of the problems just mentioned. As a rule, use only mineral wool that is allowed for use in a fire protection system, as **specified by the supplier and validated by a fire test.**



Include firestopping at the start of the design phase

Professional planning in the design phase will make sure the right products and systems are used on the job site. The specifier or planner needs to select the most effective firestopping solution that fits into the whole fire protection plan. A good communication and cooperation between specifiers, suppliers, and contractors are key to get the job done well and to eliminate additional work or costs down the road. Therefore, BIM objects have become increasingly important to facilitate the building process for architects, contractors, installers, and building owners. Manufacturers who share their knowledge and experience can provide support throughout the process. Promat has a dedicated team of firestopping experts and technicians. If you miss crucial information or need a second opinion, they are eager to help. Don't hesitate to contact them. Professional planning in the design phase will make sure the right products and systems are used on the job site. The specifier or planner needs to select the most effective firestopping solution that fits into the whole fire protection plan. A good communication and cooperation between specifiers, suppliers, and contractors are key to get the job done well and to eliminate additional work or costs down the road. Therefore, BIM objects have become increasingly important to facilitate the building process for architects, contractors, installers, and building owners. Manufacturers who share their knowledge and experience can provide support throughout the process. Promat has a dedicated team of firestopping experts and technicians. If you miss crucial information or need a second opinion, they are eager to help. Don't hesitate to contact them.



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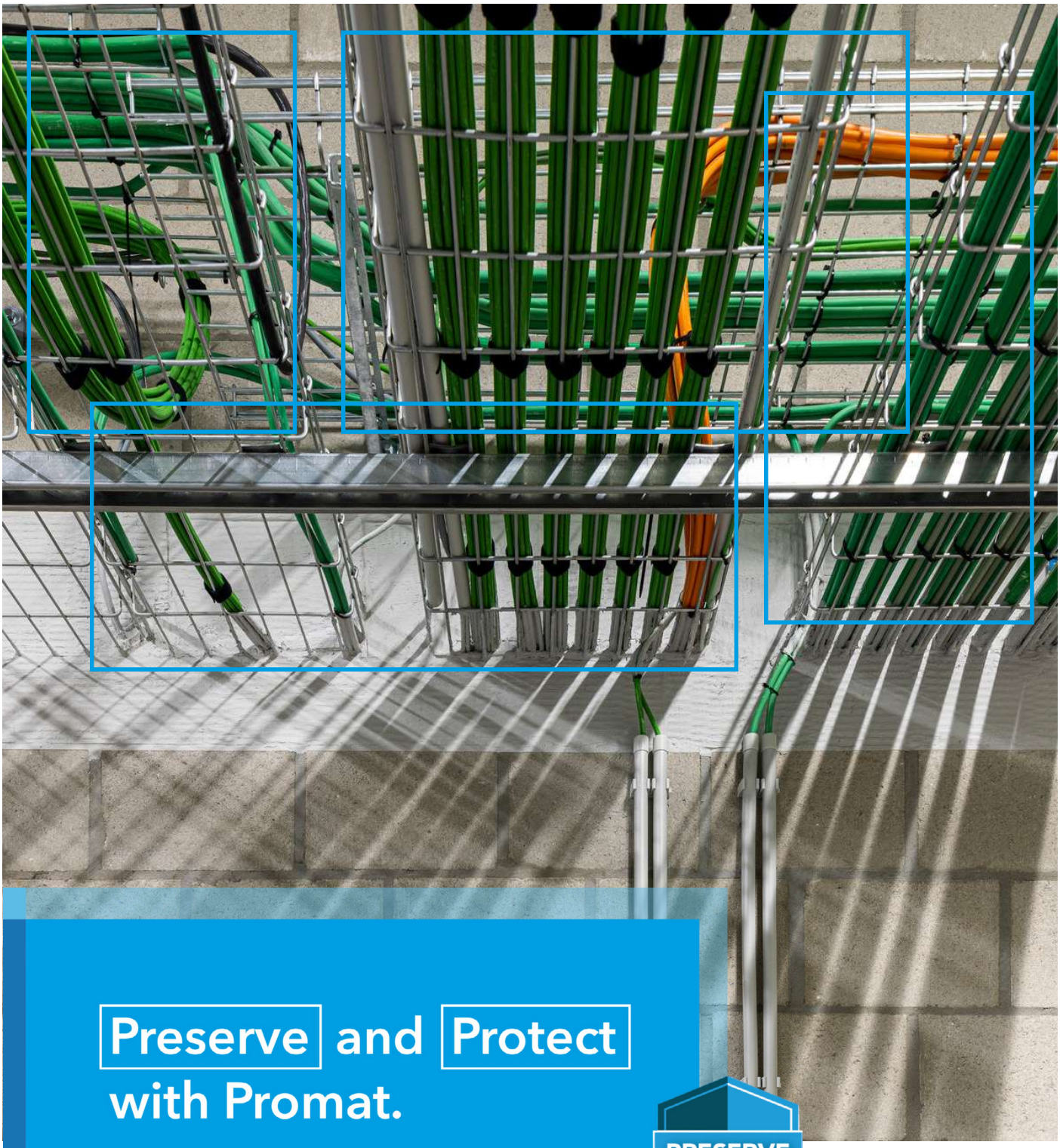
Never compromise on safety



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