

**Let's Build Smarter.**

## **A range of firestop products help give skyscraper occupants time to escape a fire.**

The importance of a barrier against fire is obvious: every second you can stop or even slow the spread of fire gives a building's occupants more time to get to safety. But that means stopping every path a fire, smoke or toxic gases might take: not just the same doors and corridors people use, but around every wire, pipe and duct that penetrates a wall, floor, or ceiling, as well as the joints where fire-rated walls meet floors and ceilings. Gilbane Building Company understands the importance of fire safety, so when they were installing firestop products for their project at 50 Hudson Yards in New York City, they chose 3M.

### **Gilbane Building Company**

Founded by two brothers as a small carpentry business in 1870, Gilbane Building Company is now a global integrated construction and facility management services firm that is still held privately and family-owned. An early reputation for quality and dedication to excellence has stayed true across generations of family members, and in 2019 96% of projects had zero lost-time injuries. Clients entrust the firm with the projects that will build their futures and Gilbane delivers, from sustainable building to the latest in lean construction and management. Customers also come back: 75% of Gilbane's work comes from repeat clients.

### **Firestopping all the way to the top.**

Skyscrapers present a special circumstance when it comes to firestopping barriers—due to their size they can hold a lot more occupants, and those occupants can't just get out, they have to go down first. 50 Hudson Yards will be the fourth largest commercial office tower in New York City, spanning an entire block and over 1000 feet high—around 2.9 million gross square feet. It will also be one of the few buildings on Manhattan's west side able to accommodate more than 500 people per floor.

Unlike active fire suppression (sprinkler systems or other ways of putting a fire out), passive fire barriers slow or stop the movement of smoke, toxic gases and fire. Fire-rated walls, floors and ceilings provide the basic barrier, but any small hole can allow fire or smoke to migrate, so building codes require all gaps to be filled with a UL-listed firestop system to maintain the integrity of the fire-rated construction. For an egress stairwell that allows occupants to leave the building, building codes require that it be firestopped at all levels to keep people safe as they exit their floors and the building. At 50 Hudson Yards Gilbane uses 3M fire barrier products to address three aspects of fire protection:

- Construction joints: wherever a fire-rated wall meets another fire-rated wall, floor or ceiling it creates a joint that must be sealed to maintain the integrity of the fire rating.
- Through penetrations: pipes, electrical wires and ducts all require holes to penetrate through fire-rated construction, which then require firestopping between the penetrant and the edge of the hole to re-establish the integrity of the fire-rated construction.



- Flexible wraps: certain pipes, wiring bundles and ducts must also themselves be protected by wrapping these elements in a flexible material that can withstand fire for a rated period. This prevents fire from migrating along a generator fuel line or through an egress air supply duct, or electrical control systems from shorting out and preventing other critical systems from operating.

### 3M Fire Barrier Products

3M helped create the fire protection industry over 35 years ago by providing products that stop fire and smoke from migrating, and continues to innovate with products that are effective, reliable and easy to apply.

- 3M™ FireDam™ Spray 200 is a highly elastic sprayable sealer that provides up to 4-hour fire protection in construction joints and can withstand compression or extension up to 50% of nominal joint width without cracking. It resists sag to stay where it's sprayed and is formulated for a high coverage rate and fast dry times. This product applies with conventional airless spray equipment and cleans up with water.
- 3M™ Fire Barrier Sealant FD 150+ is a gun-grade elastomeric sealant that applies with conventional caulking equipment and has a high solids formulation for limited shrinkage. It provides a continuous seal that can withstand compression or extension up to 19% of nominal joint width to allow normal pipe movement within a building. It dries to the touch in 30-60 minutes, can be entered and repaired, and cleans up with water.
- 3M™ Fire Barrier Sealant CP 25WB+ is a gun-grade intumescent sealant that expands when exposed to fire in order to maintain a firestop penetration seal for up to four hours. This sag-resistant material is engineered for strong adhesion to a full range of construction materials. The water-based formulation provides easy cleanup and can be entered and repaired.
- 3M™ Fire Barrier Composite Sheet CS-195+ is a lightweight firestop that combines an intumescent material with three other layers into a single sheet system that is easy to cut and form to exact sizes with common trade tools. It is used to firestop larger through-penetrations such as cable trays, conduit and large blanks.
- 3M™ Fire Barrier Duct Wrap 615+ is a thin, flexible, lightweight duct wrap that provides a space-saving alternative to bulkier traditional methods such as gypsum wall shafts. It is commonly used for ventilation ducts, stair pressurization ducts and commercial kitchen grease ducts, and can be installed with zero clearance to combustible materials.

- 3M™ Interam™ Endothermic Mat E-5A-4 is a flexible heat-absorbing wrap system that releases chemically bound water when exposed to extreme heat. This versatile wrap is easy to cut and configure for critical applications such as structural steel and electrical circuits and provides protection against intense fires, including hydrocarbon fires. Inspections can be conducted by simply unwrapping the mat, inspecting and then rewrapping.

## Easy, consistent installation helps with safety and productivity.

Products that are easy to apply create fewer complications and are more likely to be installed correctly and pass a fire inspection the first time. That's one of the reasons Gilbane appreciates the 3M family of fire barrier products.

3M also helps general contractors like Gilbane with training to help make sure fire barriers are installed correctly. Whether there are new installers who have been hired or a product that the installation team isn't familiar with, this training helps with accuracy and productivity so installers can complete one job and move on to the next.



## Easy, efficient application for a critical function.

Installing barriers that prevent or slow the spread of fire, smoke and toxic gases gives building occupants critical time to move to safety. At 50 Hudson Yards, Gilbane Building Company is using a range of 3M fire barrier products that not only provide reliable firestop barriers but are also easy to install quickly and correctly. By building smarter with 3M products, Gilbane is able to install reliable fire barriers that meet or exceed applicable codes while also satisfying client requirements for productivity.

To learn more about how 3M can help you build smarter, please visit [www.3M.com/BuildSmarter](http://www.3M.com/BuildSmarter).



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