

Protecting Life,  
Property  
and Environment



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## Protecting lives for more than 30 years

In 1974, the movie *Towering Inferno* sparked the imagination of Richard Licht, a 3M product developer who passionately believed 3M technologies could be used to improve the safety of multi-storey buildings. Several devastating fires – including the 1980 MGM Grand Hotel fire that killed 84 people and injured 679 – inspired Licht to develop the first firestop products based on existing 3M intumescent technology.

Recognized by many as “The Father of Firestopping”, Licht also helped develop some of the first firestop requirements in commercial building codes. He worked tirelessly to make the codes more demanding to improve the safety of all buildings.

# 3M Firestopping Progress and Trends

As an industry leader, 3M drives technologies that enable lower cost building solutions. For instance, 3M intumescent technology enabled the use of plastic pipes that were originally banned in commercial buildings due to their combustible nature – providing a cheaper, easy-to-install solution for electrical conduits and plumbing lines.

### 3M gains reputation for leadership and earns the industry's trust:

1980

3M™ Fire Barrier FS-195 Wrap/Strip introduced.

1981

3M helps write the first specific test standard for through penetration firestop systems (ASTM E 814).

1982

3M™ Fire Barrier CP25 Caulk, 3M™ Fire Barrier Putty 303 and 3M™ Interam CP25WB Caulk – Mat introduced.

1990

3M develops an industry milestone with reformulated, water-based 3M™ Fire Barrier CP25WB Caulk – easier to clean and less environmentally impactful than most solvent based caulks.

1994

3M introduces fire protection wraps for grease, air, fume and plenum ducts. This established 3M as a full service fire protection provider for through penetrations, construction joints and now protective insulative wraps.

1997

3M introduces Firedam Spray for construction joints to meet ASTM 1399 test criteria.

2003

3M launches first firestop sealants to meet new UL Water Leakage Test, W Rating-Class 1 requirements.

2004

3M named #1 brand preferred by installers of firestop products.

2006

3M develops e-Train, a comprehensive on-line firestop program that has become the industry benchmark for training.

2009

3M introduces a new innovative intumescent coating to meet (ULCS 101, UL 263 & ASTM E 119)



# Leadership You Can Trust

*Comprehensive fire protection includes fire detection, fire containment and fire suppression.*

*3M Fire Protection Products address fire containment and are an integral part of a well designed fire protection system. Our understanding of the spread of fire, smoke, and toxic gases helps us continue to create preventative and affordable firestopping solutions.*

3M is proud to be the industry leader in firestopping. Our dedication to stringent testing and code developments help make buildings safer today than they were even 10 years ago. And when that dedication is backed by a brand as powerful as 3M, you get what you would expect – proven reliability and outstanding service.

The construction industry is increasingly moving toward easy-to-use firestop solutions. That's why 3M, in its leadership role, provides cutting-edge and fully integrated systems. These systems are designed to help you efficiently build safer buildings that protect lives and property.

The majority of 3M's firestopping innovations are tested on-site in the company's own UL, ULC, FM and Intertek certified fire-test centre. By testing these systems in job-specific conditions, we help you with high-quality, effective firestopping solutions.

*Building designs and uses continue to evolve, and so too must 3M firestop technology. For example, in buildings where telecommunication cables are constantly being upgraded, the 3M™ Fire Barrier Pass-Through Device allows for re-enterability and helps keep cables organized and protected (for more information see page 8).*

*From time-tested fire barrier sealants to today's innovative firestop devices and protective wraps, 3M scientists work to develop solutions to firestop virtually anything on a building site. With over 100 products and over 1000 tested approved systems, 3M has the most complete program for all your firestopping needs.*

# Partners in Protecting Lives

Being the fire protection leader goes beyond selling innovative products. We partner with you from the start – providing a comprehensive line of products and systems, excellent technical services, and the superior training you need to enhance your firestopping capabilities.

We meet with you to discuss your application to help you select the best firestopping solutions. To ensure your inspection process goes smoothly, we work directly with building inspectors. By continuing to work closely with you throughout a building's life – including retrofit and maintenance activities – we support you as you work to ensure your building's firestopping is being properly managed.

## Risk Management

3M's Firestop Risk Management Program is a comprehensive approach to helping you manage the complexities of project firestopping. From helping you define your initial needs to helping manage your firestopping throughout a building's life, we walk you through the decisions and steps required to keep your project on time, in budget and code-compliant.

*For more information on the 3M Firestop Risk Management Program, contact your local 3M Fire Protection Sales Representative.*



# 3M Firestopping Partnership,

## Choosing a Technical Data Sheet

The easy-to-use, on-line 3M Firestop Applications Selector helps you choose the firestop solution best suited to your application. To learn more, and to see the latest in firestopping solutions, visit [www.3M.eu/fire](http://www.3M.eu/fire)

# Training with the Best



People expect more from 3M, and when it comes to training and product testing, 3M delivers. We provide comprehensive firestop training.

Training provides a wealth of information – from firestopping basics and system nomenclature to detailed installation techniques. The program's high-quality videos highlight proper installation techniques in a broad range of systems for through-penetrations, construction joints and flexible wrap systems.

Over the last 10 years, 3M has provided detailed, hands-on firestop training for more than 5,000 code officials, architects, contractors and firestop professionals at the 3M Global site fire-test centre. Plus, 3M offers job-site and on-location training by our sales representatives.



## Training and Testing



### 3M Test Centre

For more than 20 years our fire-test centre has ensured quality results, and it's been qualified under UL, ULC, FM and OPL/Intertek guidelines for their Witnessed Test Data Programs. Extensive product testing, on-line and hands-on training are just a few more ways 3M partners with you to help keep people safe.

# Service Penetration Devices

## Pass-Through Devices

*Code-compliant devices designed for easy installation and re-enterability – perfect for firestopping structures where electrical, data and communication cables or plumbing pipes pass through fire-rated floors and walls.*

## 3M™ Fire Barrier Devices

Fire barrier devices offer an effective one-piece solution for the firestopping of penetrating items through rated walls and floors. During a fire, these devices intumesce to form a seal, which helps protect against the spread of fire, smoke and toxic gases.

Fire barrier devices are easy to install and are designed to take the guess work out of firestopping.

3M offers pass-through options for walls and floors, as well as, cast-in place options for poured concrete floors. 3M Fire Barrier Devices offer a simple, and in a majority of cases caulk-free, code compliant alternative to complicated caulk systems. Plus, some have the added benefit of retrofit firestop capabilities, which means fewer hassles after buildings are occupied.



51 mm Round

64 mm Square

102 mm Square

102 mm Round

## 3M™ Fire Barrier Pass-Through Devices

Re-enterable and caulk-free.

- Available in 51 mm round, 64 mm square, 102 mm round and 102 mm square sizes
- Hot and cold smoke seal
- Stackable for penetrant versatility
- Hinged for easy retrofit installation around cables

# Service Penetration Devices

## 3M™ Fire Barrier Pass-Through Mounting Brackets

Use for wall or floor mounting applications.

- Mounting brackets available for wall or floor mounting of 3M Fire Barrier Pass-Through Devices:
  - Single mounting bracket available for all devices
  - Triplex and Sixplex mounting brackets available for square devices



## 3M™ Fire Barrier Pass-Through Stud Brackets

Use for stud mounting applications.

- Allows for stud mounting of 3M Fire Barrier Pass-Through Devices during construction



## 3M™ Fire Barrier Putty Sleeve Kits

Use for concrete floors, concrete walls, concrete block walls, and gypsum wall board.

- Designed to be used for both new construction and retrofitting
- System offers dual fire and cable through-penetration protection
- Kit includes all components required to meet firestop code for installation of cable and blank applications
- Rolled-out lip on sleeve facilitates smooth cable entry
- Brackets and sleeve work in tandem to help prevent slipping during installation — sleeve won't pull out
- Bracket plate covers smooth and rough irregular shaped openings to fit a variety of installation needs
- Red colour for easy identification and inspection
- Economical — putty sleeve kits are versatile enough to help reduce inventory
- Available in three sleeve sizes: 25 mm, 51 mm and 102 mm



Label holds sleeve together until you need to retrofit around existing cables. Slit label to open sleeve. Close the two halves around the cables.



Bracket covers oversized openings (up to 19 mm annular space). Innovative sleeve design assembles with the brackets to help prevent slipping during installation.



Installation of putty and application of identification label completes pass-through firestop. Putty holds cables in position, helping to prevent cable slippage and movement.

# Service Penetration Devices

## Cast-In Devices

*These firestop devices are designed to make firestopping through concrete easy and affordable. With models available to accommodate plastic or metallic pipe, 3M™ Fire Barrier Cast-In Devices are installed prior to the concrete pour (attaching directly to the wood forms) and can be adjusted to various concrete depths.*

### 3M™ Fire Barrier Cast-In Device

Firestop devices used with metal and plastic pipes.

- Attach directly to wood forms before concrete is poured, penetrating item is passed through device after the concrete cures
- Easily adjustable bodies that can be adapted to concrete height (from 64 mm up to 203 mm)
- Models available for metallic or non-metallic penetrating items allowing metallic, non-metallic, cables and insulated penetrants
- Available in 51, 76, 102 and 152 mm diameter by 203 mm height



Plastic Pipe Devices



### 3M™ Fire Barrier Cast-In Metal Deck Adapter

A one-piece plastic body assembly to accommodate fluted metal decks.

- Use in conjunction with 3M Fire Barrier Cast-In Devices
- Available for use with 51, 76, 102 and 152 mm 3M Fire Barrier Cast-In Device



### 3M™ Fire Barrier Cast-In Device Height Adapter

A one-piece plastic body assembly allows 3M Fire Barrier Cast-In Devices to be used in up to 305 mm concrete thickness.

- Designed to accommodate pipe sizes from 38 to 152 mm
- Easily snaps into place – no additional fastening required
- Available for use with 51, 76 and 102 mm 3M Fire Barrier Cast-In Device



# Service Penetration Materials

## Mineral Board

### 3M™ FireDam 240 Coated Mineral Board

FireDam 240 Coated Mineral Board is pre-coated on one side with the 3M™ FireDam 2000 an high performance intumescent latex based and has a density of 200 kg/m<sup>3</sup>. When exposed to fire, the intumescence property expands up to 10 times its own volume and in combination with the mineral wool it provides optimal insulation and integrity performance. It is particularly suitable for sealing large areas with electrical and mechanical penetrations. Thanks to its high density, the board exhibits optimum heat resistance and mechanical and acoustic properties.

- European Technical Approval – ETA - 09/0326 tested in accordance with ETAG No 026:  
Part 2 - Penetration Seal, Edition 2008-0101
- Tested up to EI 240 min
- Meets the BS EN 1366-3: 2004 Resistance to fire
- Fire Resistance tested according with BS EN 1366-3:2004
- Fire Resistance Tests for Service Installations – Part 3: Penetration Seals
- Fire Classification in accordance with EN 13501-2:2003
- Pre-coated intumescent board (high expansion)
- Easy re-enterable / repairable after installation
- Flexible and elastic coating
- Easy cut to size
- Halogen-free
- Paintable



## Packing Material

### 3M™ Fire Barrier Packing Material PM 4

Lightweight packing material to be used with through-penetration firestops. Approved for use in up to 4-hour firestop systems.

- Convenient, hand-tear dispensing
- For almost any through-penetration firestop project
- Approved for use in all of 3M's UL, ULC listed through-penetration firestop systems
- Less irritating to skin than competitive products



# Service Penetration Sealants



## 3M™ Fire Barrier CP 25WB+ Sealant

Our most popular firestop sealant approved up to 4-hours when used with most plastic and metal pipes.

- Provides up to 4-hours
- Superior adhesion – bonds to concrete, metals, wood, plastic and cable jacketing
- Intumescent – expands when heated to seal around items consumed by fire

**\*Not approved for use with CPVC pipes made using Noveon® resins.**



## 3M™ Fire Barrier IC 15WB+ Sealant

Affordable UL, general-purpose sealant approved up to 4-hours when used with plastic and metal pipes.

- Provides up to 4-hours
- CPVC compatible
- Superior adhesion – bonds to concrete, metals, wood, plastic and cable jacketing
- Intumescent – expands when heated to seal around items consumed by fire



**FGG = BM = C2**  
**SYSTEM COMPATIBLE**

# Service Penetration Watertight Sealants

## Fire Barrier Watertight Sealants

*Achieve the benefits of firestopping and a watertight seal in one application!*

- Provides excellent adhesion on most construction surfaces, including: concrete, gypsum, metal, plastic, wood and insulation
- Ideal for the following interior construction voids: blank openings, metallic pipes, non-metallic pipes, cables, cable trays, insulated pipes, busways, combos

### 3M™ Fire Barrier Watertight Silicone 3000 WT Sealant

High-performance intumescent silicone achieves the benefits of a firestop and watertight seal.

- Provides up to 4-hours
- Excellent weatherability – ideal for fast-track construction
- Cures upon exposure to atmospheric humidity
- Re-enterable and repairable



Available 2012



### 3M™ Fire Barrier Watertight Sealant 1003 SL

Self-leveling silicone with up to 4-hours of fire protection.

- Ideal for complex applications
- Fast solution
- Floor application





# 3M Fire Barrier Specialty Products

*From wrap strips and restricting collars to 3M™ Fire Barrier Mortar, these code approved products help round out 3M's comprehensive offering of service penetration firestops.*

## Wrap Strips & Restricting Collars



### 3M™ Fire Barrier Ultra RC Pack

A one-piece metal collar assembly encasing 3M's heat expanding 3M™ Interam™ Ultra GS intumescent material.

- Ultra fast anchoring system secures the device to most substrates without the use of power tools
- Used for firestop penetrating items such as plastic pipe in new and retrofit installations
- One-piece construction makes installation easy
- Proven technology – intumescent action quickly seals off the penetrating item in a fire
- Available in 51, 76 and 102 mm sizes



*Available 2012*

### 3M™ Fire Barrier Plastic Pipe Device

Use for firestopping penetrating items such as plastic pipe and cables in new and retrofit installations.

- Ultra-fast anchoring system secures the device to most substrates without power tools
- One-piece construction makes installation easy
- Proven technology – intumescent action quickly seals off the penetrating item in a fire
- Can be used to seal the following plastic pipes: ccPVC, PVC, CPVC, FRPP, PVDF, ccABS and ABS
- Available in 36, 51, 76, 102 and 152 mm sizes



# Service Penetration Specialty Products

## 3M™ Fire Barrier RC-1 Restricting Collar

Works in conjunction with Wrap/Strip to firestop plastic pipes up to 254 mm in diameter.

- 28-gauge steel
- Convenient 7.62 m roll – cut only what you need



Available 2012



3M™ Fire Barrier Tuck-In Wrap Strips are designed for use with PVC, PVCc, PE and PP plastic pipes penetrating through concrete floors, block and concrete walls, and gypsum stud walls. Wrap Strip easily slides into annular space and is topped with 3M™ Fire Barrier IC 15 WB+ and 3M™ Fire Barrier FB3000WT.

## 3M™ Fire Barrier Tuck-In Wrap Strips

- Three sizes available (200 mm, 300 mm & 400 mm)
- Available in roll of 2.4 m
- Engineered for top-side firestop through penetration installations on concrete floors
- Labour savings – helps eliminate the need for retaining collar, concrete screws, ladder, etc.
- Flexible foam strip wraps around pipe to fill tough areas and gaps
- Adhesive closure tab for easy installation
- Expands 100x in volume
- Wrap Strip pre-cut to nominal pipe size



Available 2012



## Safe Handling Information

Consult applicable country-of-use Material Safety Data Sheet (MSDS) of any 3M™ Fire Barrier Sealant, Mortar or Pillows used in conjunction with 3M™ Fire Barrier Tuck-In Wrap Strips prior to handling and disposing of that product.

# Service Penetration Specialty Products



Multiple pillow sizes and ability to field-cut allow for a secure fit in most openings (seal cut edges with polypropylene box sealing tape).

## 3M™ Fire Barrier Self-Locking Pillows

Interlocking strips hold pillows securely together yet release easily for retrofit or reuse – just remove and replace pillows as needed.

- No wire mesh reduces safety issues
- Easy to install, easy to remove and reuse
- No cutting and no mess – just lock pillows together, compress and place (use 3M™ Fire Barrier Moldable Putty+ around edges to ensure proper seal)
- No graphite
- Excellent aging properties
- Available in 51 x 102 x 229 mm (small), 51 x 152 x 229 mm (medium) and 76 x 152 x 229 mm (large) pillow sizes
- Pressurization

## Fire Barrier Pillows

*Self-contained, highly intumescent pillows are designed to firestop a wide variety of through-penetrations including cable trays, conduit and blank openings.*



# Service Penetration Specialty Products



*Available 2012*

## 3M™ Fire Barrier CS-195+ Composite Sheet

Ideal for fire-stopping blank openings and through-penetrations of multiple cables, pipe ducts and cable trays.

- Great substitute to firestop mortar in the wall
- No mixing or damming required
- Easy to install using common trade tools
- Easy to fasten, bolt punch or drill through and use self-tapping screws or anchor bolts
- Re-enterable
- Available in the following sizes:
  - 40.64 x 71.12 cm ..... (bulk and boxed)
  - 91.44 x 60.96 cm ..... (bulk and boxed)
  - 91.44 x 91.44 cm ..... (bulk and boxed)
  - 91.44 x 104.14 cm ..... (bulk and boxed)
  - 71.12 x 132.08 cm ..... (bulk only)
- Provides up to a 4-hour fire rating



## 3M™ Fire Barrier Moldable Putty MP+ Sticks

Designed to firestop a wide variety of through penetrations, including: cable, conduit, insulated pipe and metal pipe.

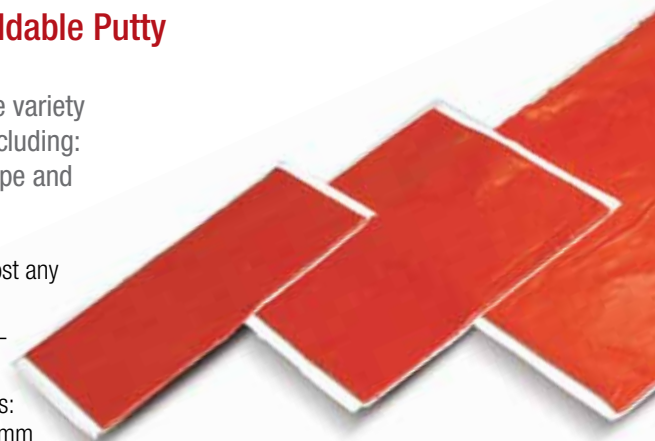
- Pliable – can form into almost any desired shape
- Will not dry out or crumble – can be sealed for reuse
- Available in 36 x 152 mm and 36 x 279 mm stick sizes



## 3M™ Fire Barrier Moldable Putty MP+ Sticks & Pads

Designed to firestop a wide variety of through penetrations, including: cable, conduit, insulated pipe and metal pipe.

- Pliable – can form into almost any desired shape
- Will not dry out or crumble – can be sealed for reuse
- Available in 3 mm thick pads: 102 x 203 mm, 178 x 178 mm and 241 x 241 mm sizes



# Service Penetration Specialty Products

## Marine Fire Wrap

### 3M™ Fire Barrier Packing Material PM 4

Lightweight packing material to be used with through-penetration firestops. Approved for use in up to 4-hour firestop systems.

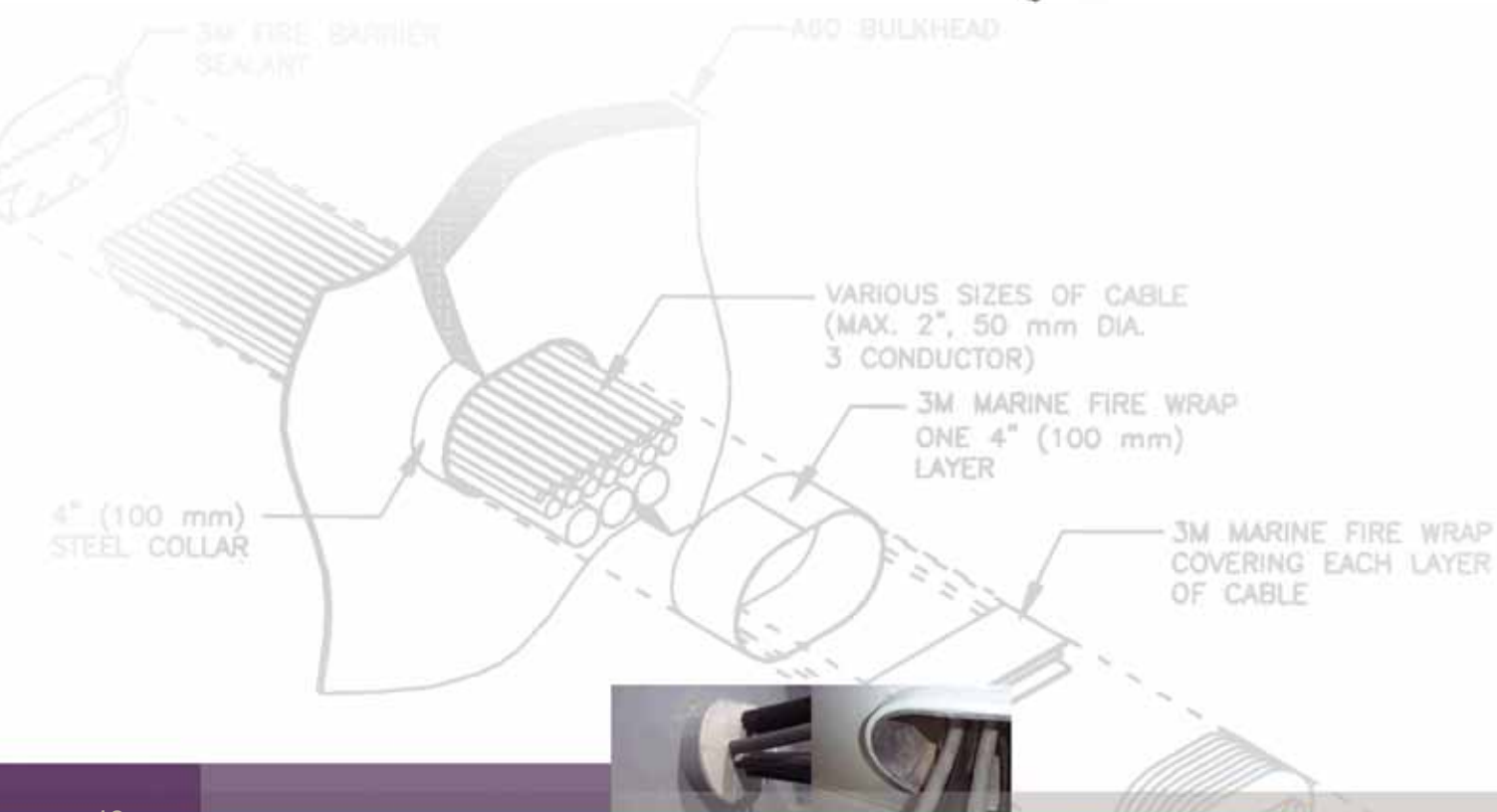


- Convenient, hand-tear dispensing
- For almost any through-penetration firestop project
- Approved for use in all of 3M's UL, ULC listed through-penetration firestop systems
- Less irritating to skin than competitive products

### 3M™ Marine Fire Wrap

The fastest way to firestop decks and bulkheads.

- Intumescent (25 times expansion, unrestricted)
- Excellent thermal insulator when expanded
- Smoke seal – retards the spread of deadly smoke when used in conjunction with an approved sealant
- Extremely flexible
- Easy to cut
- Normal disposal procedures
- 100 mm wrap is available in 3 mm thick single-layer or 6 mm thick double-layer construction
- Meets IMO, DNV and Lloyds performance criteria



# Service Penetration Specialty Products



## Mortar

### 3M™ Fire Barrier Mortar

Lightweight, gypsum-based and endothermic firestop that is ready for mixing with potable water.

- Up to 2 hour fire ratings per EN-1366-3
- Variable mix ratio permits self-leveling as well as trowelable application consistencies including concrete floors with 100 mm minimum thickness
- Excellent adhesion — bonds to concrete, metals, wood, plastic and cable jacketing
- Re-enterable/repairable with common trade tools
- Acts as a heat sink, reducing the likelihood of combustible matter igniting on the unexposed side of the assembly
- Dry mix available in 18.9 litre (12.7 kg) pails and 19.9 kg bags

**\*Not load bearing.**

*Available 2012*



Firestops service penetrations passing through fire-rated floor or wall assemblies.\*



### 3M™ Fire Barrier Expanrol Flexible Intumescent Strip (E-FIS)

Designed to seal the air space between doors and frames and for glazing fire resistant glass to help prevent the passage of smoke and flames in the event of a fire.

- Expands when heated to seal around objects consumed by fire
- Retards spread of toxic by-products of combustion
- Excellent flexibility, easy, cost-effective installation
- Low flame spread and smoke development
- Can be cut to fit irregular shapes
- No special tools required
- Non-flame supporting
- Low odour





Available 2012



# Construction Joint Firestop Solutions

Whether you are a drywaller, carpenter, caulker, waterproofer, glazer or masonry contractor, one thing you know is construction joints move. When construction joints require firestopping, you need a tested product that can meet the demands of expanding and contracting joints day in and day out.

That's why 3M Fire Protection Systems developed fire barrier sealants and sprays. They meet the movement needs of head of wall, wall to wall, bottom of wall and perimeter joints. These products undergo stringent building movement testing prior to firestop testing and are designed to meet the challenges of firestopping construction joints for many years.

## 3M™ FireDam™ 200 Spray

This sprayable coating is a quick and easy method for firestopping fire rated construction joints, including: head-of-wall, wall-to-wall, floor-to-floor and perimeter joints.

- High coverage rate reduces installation time
- Fast-dry, low-sag formula
- Grey colour blends well with both concrete and gypsum
- Dries quickly to dark grey or red
- Applies with conventional airless spray equipment
- Paintable when cured
- Elastomeric – forms a flexible seal with compression/extension of up to  $\pm 25\%$  of nominal joint width
- Easy clean-up with water
- Available in 20 Litre pails



Red



Grey

# Construction Joint Sprays and Sealants



Available 2012



## 3M™ FireDam™ 150+ Sealant

Tested and approved for single metallic pipe penetrations and construction joints.

- Water-based for easy installation, cleanup and disposal
- Endothermic fillers absorb heat and release chemically-bound water
- High-solids formula means no shrinkage
- Multiviscosity grade offers excellent caulking properties
- Available in limestone or red colour
- Excellent movement capabilities
- Low VOC



Limestone



Red



## 3M™ Fire Barrier Watertight Sealant 1000 NS

Non-slumping silicone with up to 3-hour fire protection



Limestone

Available 2012

# Flexible Wrap Systems



Available 2012

## 3M™ Flexible Wrap Fire Protection Systems

3M Flexible Wrap Systems address a variety of application needs including air ducts, grease ducts, chemical exhaust ducts and plenum. They are also excellent for oil and gas refineries and other industrial applications. The insulative properties help keep heat, fire and smoke contained.

### **3M™ Fire Barrier Duct Wrap 615+**

Manufactured with a man-made vitreous spun fibre, a calcium-magnesium silicate (CMS) wool technology which is bio-soluble, allowing for low thermal transfer properties in a lightweight, low profile, easy to apply product.

- Lightweight 96 kg/m<sup>3</sup> and thin 38 mm for easier application
- Broadest and most economical tested duct hanging support system in the industry
- Up to 2 hour fire protection



# High Intensity Fire Solution

*3M™ Interam™ Endothermic Mat opens up new opportunities in building design in allowing engineers to fulfill the requirement of the different fire exposure; cellulosic, hydrocarbon and jet fire while enhancing design flexibility. Using advanced endothermic materials, the 3M™ Interam™ Endothermic Mat helps prevent the transfer of heat from the expose side to the protected items via a chemical reaction, which absorbs the heat energy. Its space-saving, conformable construction offers easy installation in a broad range of applications, providing flexible, full envelope protection in critical areas of all types.*

## Applications

### Electrical:

- Cable Trays
- Cable Bundles
- Electrical Panels

### Mechanical:

- Vessels
- Storage Tanks

### Structural:

- Columns
- Structural Steel
- Support Members

### Instrumental:

- Process Measurement Instrumentation
- Control Valves & Regulators
- Instrument Air & Piping
- Safety Instrumented Systems

## 3M™ Interam™ E-5A-4 Mat

Resists heat and fire to protect structural steel and provide electrical circuit protection around cables, cable trays and conduits.

- Hydrocarbons pool fire approved systems
- Endothermic – releases chemically bound water to cool the outer surface when exposed to high temperatures
- Made of a combination of ceramic fibres and inorganic endothermic material
- Easily cuts to size and flexible
- 10 mm thick x 62.23 cm width x 6.1 m length roll size



## 3M™ 425 Aluminum Foil Tape

Aluminum foil tape is a 5 mil nominal dead soft aluminum foil backing combined with a transparent acrylic adhesive designed to seal the cut edges of 3M Duct Wrap and Interam mats to complete the total encapsulation.



- 5-mil aluminum foil
- Acrylic adhesive
- Tensile strength: 30 lbs./in. width (525N/100 mm)

# 3M Fire Protection Products



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