

# Passive Fire Protection



## Construction

Stainless Steel  
Intumescent Liner  
Acoustic Rubber Seals

## For Use With

Steel Tubes  
Copper Tubes  
Plastic Tubes

## Standards

Fully tested by independent Fire Testing Authorities, in accordance with British and European Standards

Provides inherent fire safety and protection by responding against flame, heat and smoke

Maintains the fundamental requirements of building integrity, structural stability, fire separation and safe means of escape

Achieve their intended purpose by raising the fire resistance of the structure, protecting against the effects of fire, and limiting the movement of flame and smoke

Products serve, by fire containment, to protect life, safeguard building structure and protect assets

## Description

Suitable for fire containment in both plasterboard and block work walls for upto two hour fire rated seal

The Fire Sleeve Pipe Wrap is a stainless steel sleeve lined with a high expansion intumescent compound overlaid with a fire resistant acoustic foam compression seal

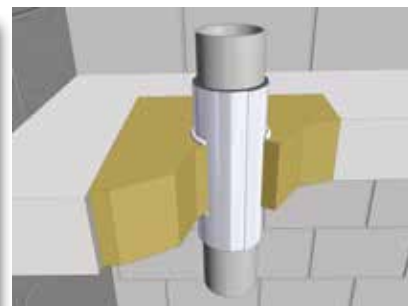
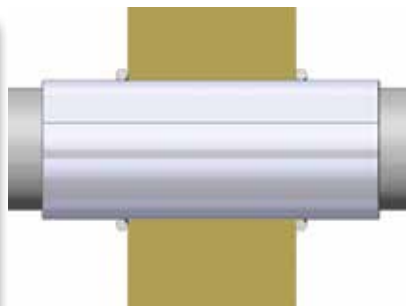
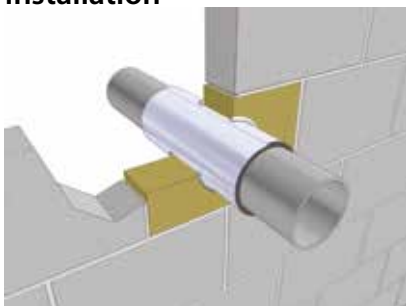
The intumescent liner and foam are water, moisture and lubricant resistant

The intumescent liner expands when exposed to heat and so provides a fire barrier

When used to seal plastic pipes it will fill the void left by the collapsing pipe

Intumescent, expands up to 50 times whilst creating high pressure of a minimum of 30 bar compression strength. It will close a plastic pipe, which is collapsing due to fire

## Installation



**IMPORTANT NOTICE: DO NOT REDUCE THE LENGTH OF THE SLEEVE**



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## ■ Benefits

- Easy to fit 'Snap-Lock' action saves fitting time
- Unaffected by water, moisture or lubricants
- Up to 2 hours of fire resistance rating
- Highly flexible
- Available in a range of pipe sizes
- Maintenance free
- Acoustic rated foam forms a cold smoke seal
- Lightweight

## ■ Product Data – Compression Seal

- Density (Kgm3) Minimum 75
- FMVSS 302 Self Extinguishing
- BS 4753 Char Length 4-5mm
- Wicking None
- Dripping None

Temperature (°C)	Depth of Seal (mm)	Expansion Rate
Ambient	1	
150	1	
170	2.1	2
200	4	4
250	12.7	12
300	28	28
450	42.3	42
600	51.7	52
800	56	56



## ■ Product Data – Intumescent Liner

- Description: a flexible graphite impregnated compound
- Density: approx. 1.3g/cm<sup>3</sup>
- Colour: black
- Expansion start temperature: approx. 200°C
- Total expansion volume: > 50 fold
- Pressure: minimum 30 bar

## ■ Limitations of use

Not to be used against sub straights that bleed oils, plasticisers or solvents. Tested following the principals of BS 476 Part 20 and EN 1366-3: 2009.

## ■ Packaging

Fire Sleeve Pipe Wraps are manufactured in 205mm lengths. Individually packed.

## ■ Storage

Store in frost free, dry conditions below 30oC.

## ■ Health & Safety

Fire Sleeve Pipe Wrap presents no hazard to health during installation.  
All copies of test reports are available upon request.

All Pipe Sleeves are 205 mm long  
Sizes are the same for Steel, Copper and Plastic Pipe.

Size Ø mm	Size Ø mm
15	96
18	99
21	102
24	105
27	108
30	111
33	114
36	117
39	120
42	123
45	126
48	129
51	132
54	135
57	138
60	141
63	144
66	147
69	150
72	153
75	156
78	159
81	162
84	165
87	168
90	171
93	174



Larger Sizes Available on Request



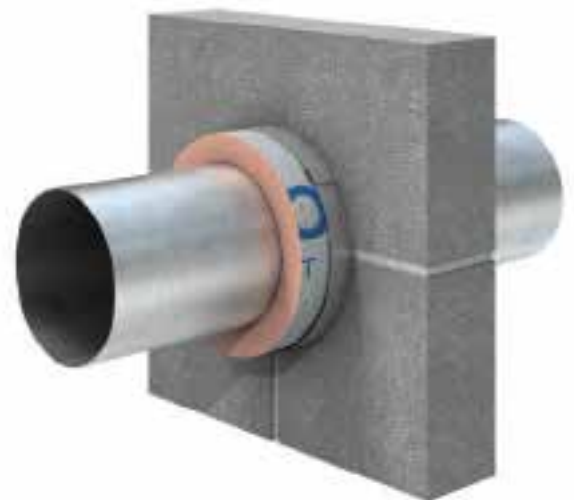
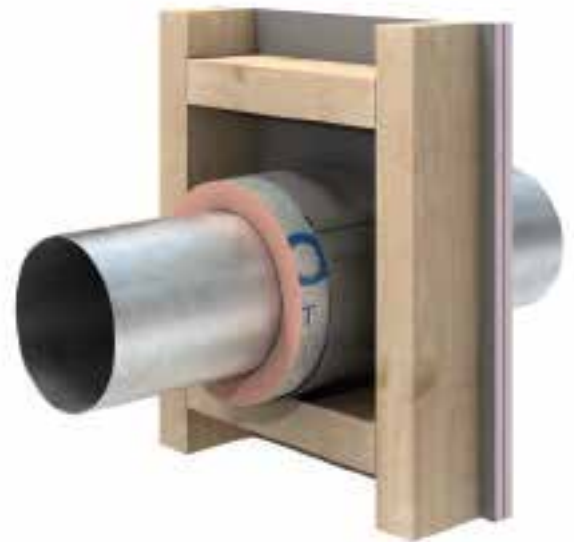
As part of Excoco's complete passive fire protection system offering, Kooltherm® FireSleeves are a unique combination of high performance phenolic insulation, intumescent and stainless steel.

These innovative products act as a 2 hour fire stop on both steel and copper pipe service penetrations through timber frame and block wall applications, and incorporate the excellent fire and smoke performance of Kooltherm® FM Pipe Insulation up to 30mm thick.

Kooltherm® FireSleeves comprise of an outer sleeve of 0.5mm thick stainless steel which is clasp fastening and 205mm in length. It is lined with intumescent material. The stainless steel sleeve, encloses a 300mm length of Kooltherm® FM Pipe Insulation which is also lined with intumescent material.

Kooltherm® FireSleeves can be supplied in the following sizes:

NB INCH	OD MM	THICKNESS			
		20THK Integrity/ Insulation	25THK Integrity/ Insulation	30THK Integrity/ Insulation	40THK Integrity/ Insulation
	15cu	120 / 60t	120 / 60		
1/2	15nb/22cu	120 / 60	120 / 60		
3/4	20nb/28cu	120 / 60	120 / 60		
1	25nb/35cu	120 / 60	120 / 60	120 / 60	
1 1/4	32nb/42cu	120 / 60	120 / 60	120 / 60	
1 1/2	40nb	120 / 60	120 / 60	120 / 60	
	54cu	120 / 60	120 / 60	120 / 60	
2	50nb	120 / 60	120 / 60	120 / 60	
	67cu	120 / 60	120 / 60	120 / 60	
2 1/2	65nb/76cu	120 / 60	120 / 60	120 / 60	
3	80nb	120 / 60	120 / 60	120 / 60	
	108cu	120 / 60	120 / 60	120 / 60	60/60
4	100nb	120 / 60	120 / 60	120 / 60	60/60
5	125nb	120 / 60	120 / 60	120 / 60	60/60
	133cu	120 / 60	120 / 60	120 / 60	60/60
	159cu	120 / 60	120 / 60	120 / 60	60/60
6	150nb	120 / 60	120 / 60	120 / 60	60/60
8	200nb	120 / 60			



## Installation Guidance

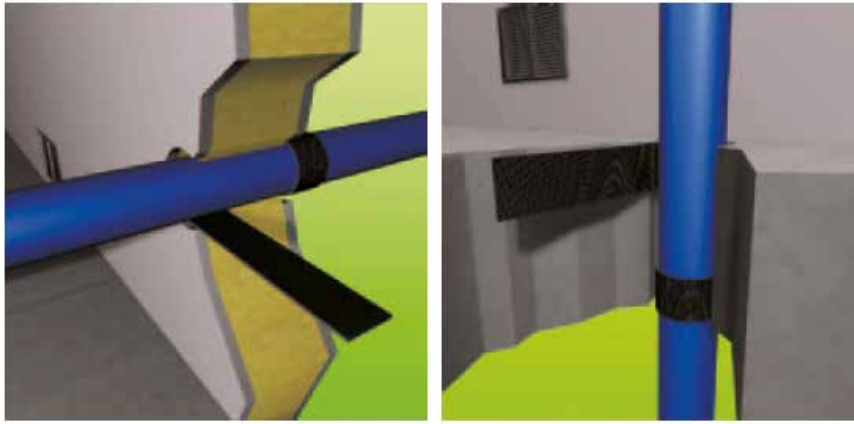
1. Prepare opening in the wall, with minimal disturbance to surrounding structure.
2. Open Kooltherm® FireSleeve and install the 300mm lined Kooltherm® Insulation onto the pipe. Fit the 205mm stainless steel fire sleeve over the intumescent lined Kooltherm® FM Pipe Insulation and ensure that the stainless steel clasp is fully engaged.
3. Ensure the Kooltherm® FireSleeve is positioned centrally within the opening.
4. Seal any gaps of 5mm or less around the exterior surface of the Kooltherm® FireSleeve with a 2hr Fire Rated Intumescent Mastic. Large gaps over 5mm should be filled with an appropriate fire rated filler or mortar.
5. Install Kooltherm® FM Pipe Insulation flush to the Kooltherm® FireSleeve and vapour seal in accordance with the project specification.



## Fire Performance

Kooltherm® FM Pipe Insulation products and Pipe Support systems achieve a BL-s1, d0 classification to EN 13501-1 when tested under the European Fire Classification System (Euroclass) for 'reaction to fire'.





**Construction**  
 Intumescent Material  
 Glass Fibre Mesh  
 Adhesive backed

**For Use With**  
 Insulated Steel Tubes  
 Plastic Tubes  
 Insulated Copper Tubes



Endless Wrap wrap gives the users versatility when installing in a multitude of common site conditions, Endless Wrap is supplied in a convenient 25m long, 40mm wide roll.

Endless Wrap is an intumescent material, based on elastomeric thermoplastic polymers combined with active components that provide high a volume expansion and pressure seal in the event of a fire.

As plastics soften or insulation burns away in the heating condition of the fire, Endless Wrap expands to close off the void left by the pipe or insulation.

Compatible pipes and insulation (see tables) are tested to a size of 200mm in diameter through flexible walls and rigid floors and walls, and for use alongside the Exco range of products.

Compatible With
PVC
PP
MDPE
PE
PVC-U
PVC-C
ABS
HDPE
SAN+PVC

ENDLESS WRAP CONFIGURATION FOR METALLIC PIPES WITH INSULATION UPTO 120MINS		
INSULATION TYPE	No OF WRAPS	THICKNESS
Phenolic Foam	2	4
Elastomeric Foam	2	4
Glass Wool	2	4
Stone Wool	2	4

ENDLESS WRAP CONFIGURATION UPTO 120MINS		
PIPE OD	No OF WRAPS	THICKNESS
40	1	2
55		4
63	2	4
75	2	4
82	2	4
90	3	6
110	3	6
125	4	8
160	4	8
200	5	10

## Construction

Stainless Steel  
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Acoustic Rubber Seals

## For Use With

Steel Tubes  
Copper Tubes  
Plastic Tubes



## Description

EC Endless Collar consists of the high performance intumescent material Strip which is wrapped in one or more layers around the pipe or the insulation and fixed with a stainless steel strap and hooks at the wall or ceiling. In the event of a fire, the intumescent material expands with high pressure and thus seals the opening hermetically against flames and smoke. For wall installations one pipe collar on each side of the wall and for ceiling installations one collar on the underside of the ceiling must be provided.

## Applications

- Sealing of plastic pipes up to max. 160 mm outside diameter in solid walls, drywall partitions and solid ceilings
- Suitable for plastic pipes, mineral fibre reinforced plastics, and plastic composite pipes
- PE acoustic insulation is possible at plastic pipes
- Synthetic rubber insulation on plastic pipes, copper and metal pipes possible
- Useable in combination with ROKU® PPF Fire Protection Foam (straight pipes and corner solutions)

## Advantages

- Flexible solution for individual applications
- Very low installation height of the collar
- One sealing serves for maximum 3 pipes side by side
- Suitable for the application in wet and humid areas
- Slim collar
- For plastic pipes in corner constructions only 2/3 of the pipe sealing may be applied
- Delivery in a practical dispenser box





## Description

Intumescent Sealant is suitable for sealing joints and service penetrations in fire walls, partitions, fire rated door frames and glazing systems. Tested to BS476 Parts 20 and 22, EXCO Group Acoustic Intumescent Sealant provides up to 4 hours fire protection in joints of up to 30mm wide

### Suitable for

- Perimeter pointing around door and window frames
- Sealing small openings in fire walls and floors.
- Sealing around plastic pipe or cable penetrations which have been protected with the recommended EXCO Intumescent product eg. Fire Sleeve Pipe Wraps.

### Features

- Fire rating up to 4 hours.
- Excellent adhesion to many common building substrates.
- Joint movement accommodation +/-17.5%.
- EXCO Acrylic Sealant expands by approximately 20% in fire conditions.
- EXCO Acrylic Sealant is fully paintable.

### Testing

- Tested to BS476 Part 20:1987 and other International Standards.

### Health and Safety

- According to 91/155/EEC Revision No.1.

Joint Size (mm)	Depth of Sealant (mm)	Integrity (mins)	Insulation (mins)	Backing	Type of Seal
10	10	240	30	PE Foam	Single
15	10	240	30	PE Foam	Single
20	15	240	120	PE Foam	Dual
20	20	240	60	C144 Firestrip	Single
30	20	240	120	PE Foam	Dual
30	15	240	30	C144 Firestrip	Single

PE Foam - Closed cell polyethylene backer rod (nominal density 35kg/m<sup>3</sup>)

MF - Mineral Wool Fibre (nominal density 100kg/m<sup>3</sup>)

NB. All tests were carried out with sealant on fire side of furnace.

Substrate Performance	
Glass	
Glass (normal)	yes
Glass (stained)	yes
Glass (reflective)	yes
Metals	
Aluminium (milled)	yes
Aluminium (anodised)	yes
Steel	yes
Steel (galvanised)	yes
Lead	N/R
Painted Surfaces	
Acrylic	test
Varnish	test
Polyester	yes
Polyurethane	yes
Plastic Materials	
PVC	yes
Acrylic/Fibreglass	yes
Polycarbonate	test
Polymethacrylate	test
Masonry	
Concrete	yes
Brick	yes
Plaster	yes
Tile	yes

### Chart Key

Use without primer - Yes  
 Check for suitability - Test  
 Not Recommended - N/R

## Construction

Powder Coated Mild Steel  
Intumescent Liner  
Activates at 150oC

## For Use With

Plastic Tubes to crush the softening plastic pipe and thereby close the penetrations through the fire rated walls and floors.



EXCO Fire Stop Collars provide a simple and effective method of firestopping plastic pipework where it passes through compartment walls and floors.

Tested to BS476 Part 20, Fire Stop Collars will provide up to 4 hours' fire protection.

- Simple to install
- Water resistant
- Maintenance Free
- Available to suit pipe sizes ranging from 55 to 355mm O.D.

EXCO Firestop Collars

EXCO Firestop Collars fixed to both sides of wall

## Description

EXCO Firestop Collars consist of a powder coated steel sleeve containing a flexible graphite based intumescent liner, manufactured to suit the pipework to be firestopped. Integral toggles are opened up and the collar is simply fitted around the plastic pipe. The toggles are closed and the collar is pushed flush to the surface of the wall or underside of floor. The collar is then securely fastened to the structure by means of fire resistant fixings threaded through fixing tabs. Any gaps of up to 25mm wide around the pipework should be filled with EXCO Acoustic Intumescent Sealant. For gaps greater than 25mm EXCO Firestop Compound can be used.

Under fire conditions the intumescent material swells filling the void left by the burnt out plastic.

## Fire Rating

Outside Ø of Pipework (mm)	Fire Rating (hours)
55 - 250	2 - 4
275 - 315	3
330 - 355	1

Suitable for sealing UPVC, Polypropylene, HDPE and ABS plastic

## Specification

Install EXCO Fire Stop Collars to provide up to 1,2,3 or 4 hours' fire protection to all plastic pipework. Installation to be fully in accordance with manufacturer's instructions. See below for contact details.



## Description

EXCO Intumescent Pipe Wraps offer a simple and more economic alternative to Firestop collars for firestopping plastic pipework and electrical trunking in walls and floors. Tested to BS476 Part 20, Intumescent Pipe Wraps will provide up to 4 hours' fire protection.

EXCO Intumescent Pipe Wraps offer a simple and more economic alternative to Firestop collars for firestopping plastic pipework and electrical trunking in walls and floors. Tested to BS476 Part 20, Intumescent Pipe Wraps will provide up to 4 hours' fire protection.

- Simple installation
- No mechanical fixings
- Water resistant
- Load bearing
- Maintenance free
- Available to suit pipe sizes up to 160mm O.D.
- Available to fit most electrical trunking sizes.

EXCO Intumescent Pipe Wrap sealed into compartment wall with EXCO Firestop Compound.

EXCO Intumescent Pipe Wrap sealed into compartment floor using EXCO Firestop Compound.

## Description

Pipe Wraps comprise layers of a graphite based intumescent sheet encapsulated in a polythene sheath. The product is manufactured to be wrapped around the outside diameter of the pipework or trunking and is secured by means of a self-adhesive strip. The Intumescent Pipe Wrap is then positioned within the compartment wall or floor so that the edge of the product is left exposed at the face of the wall or soffit.

The Intumescent Pipe Wrap is then sealed into the structure with EXCO Firestop Compound.

Under fire conditions, the intumescent material expands against the structure and fills the void left by the burnt out plastic.

For walls it may be necessary to fit two wraps depending on the fire risk areas concerned and if the wall thickness exceeds 150mm.

## Fire Rating

Outside Ø of Pipework (mm)	Fire Rating (hours)
55	2 - 4
82	2 - 4
110	2 - 4
160	2 - 4

## Specification

Install EXCO Intumescent Pipe Wraps to provide up to 4 hours' fire protection to all plastic pipework and electrical trunking where they pass through fire rated walls and floors. Installation to be fully in accordance with manufacturer's instructions. See below for contact details.