

PRODUCT BROCHURE

Passive Fire Protection







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Easy to use. Tough on Fire.

Leading the way since 1993, Polyseam specialise in manufacturing evidence-based, high-performance fire protection products and systems you can trust to perform well.

Our UK and European chemists, engineers and technicians continue to lead the field in research, development and manufacture – and our Protecta® range of market-leading passive fire protection is a direct result of their pioneering expertise.

Protecta® products continue to raise standards across our industry. Our expertise and unwavering commitment to quality, safety and performance enables our customers to create safer environments for all. We invest in excellence at every stage of the product lifecycle, from supporting those making crucial decisions about building structures and fit out, to the specialists on the frontline who are responsible for installing our products correctly.

These are just some of the reasons why Protecta® from Polyseam is the most trusted name in Passive Fire Protection.





Rely on Protecta[®]

The most trusted name in Passive Fire Protection



Proven

Highest quality firestopping products you can trust to perform.

Extensive testing evidence covering multiple scenarios.

Completely safe during installation, for the life of the building and after disposal.



Reliable

Developed by specialist chemists, engineers and technicians since 1993.

Robust proof of performance gives complete confidence.

Reliable stock delivery and responsive customer services.



Effortless

Multiple applications for individual products simplifies product selection.

Clear instructions that make sense help avoid problems on site.

Easy and quick to install.



Efficient

Responsible design means minimal wastage.

UK manufacture speeds up stock delivery.

Direct access to firestopping experts saves time.



Supported

Responsive customer service ensures problems are minimised.

Expert advice and technical back-up always available to aid problem-solving.

Free on-site guidance and training if required.



Fire stopping of tiny gaps (0 – 10mm wide)

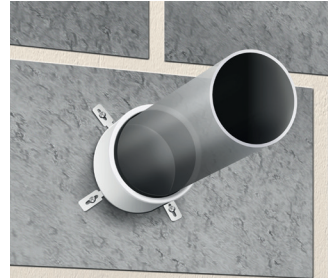


FR Putty Cord

Protecta® FR Putty Cord is ideal for fitting around service penetrations in gypsum or masonry walls and concrete floors, where there are small or virtually no gaps at all, and where it is practically difficult to apply conventional fire rated sealants and guarantee installing the approved depths of sealant and backing material.

Supplied as pre-shaped mouldable cords Ø15mm x 200mm which are push fit, self-adhesive and easy to apply. The cord is hand workable, re-serviceable and reusable due to its non-setting properties.

Protecta® FR Putty Cord is a very versatile solution and can be fitted in just seconds, offering superior environmental performance with low VOC emissions, and a working life of at least 50 years.



FR Collar

Protecta® FR Collars consist of a two part, coated, circular steel sleeve that fits around plastic pipes, insulated pipes and cable bundles in gypsum or masonry wall and concrete floors.

The painted steel collar sleeve is designed to contain the pressures developed by the intumescent's action, which expands on exposure to heat to fill and crush down the melting pipe. This then fills the void that would otherwise allow for the passage of fire and prevent the passage of unseen toxic gases.

Tested with PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC, PP and plastic composite pipes with outside diameters ranging from 32 – 315mm, the product has an impressive scope of use.

Oversized collars can be used with smaller diameter plastic pipes, and larger diameter core drilled holes in walls and floors, or can be used to firestop plastic pipes passing through compartments at 45 degrees to the plane of the wall or floor.

New approvals allow FR Collars to be used as a retrofit solution for cable bundles in bundles of up to 160mm diameter.

FR Collars offer fire classifications of up to 240 minutes for both integrity and insulation. Available in two different heights, offering a cost-effective solution and easier application, FR Collars offer fire classifications of up to 240 minutes for both integrity and insulation.



Fire stopping of small gaps (10 - 30mm wide)

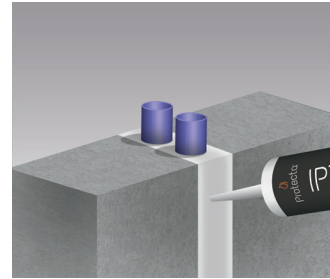


FR Acrylic

This one-part water based intumescent sealant is used to firestop, acoustically seal service penetrations and linear gap seal in gypsum or masonry walls and concrete floors.

This product is a one stop penetration seal system, negating the need to use a variety of more expensive/ additional products (e.g. with plastic pipes up to 32mm diameter), enabling you to complete the job in less time, and with less cost and effort.

Protecta® FR Acrylic can be used in joints of up to 50mm wide and offers fire resistance up to EI240 with superior movement capability and a service life in excess of 30 years.



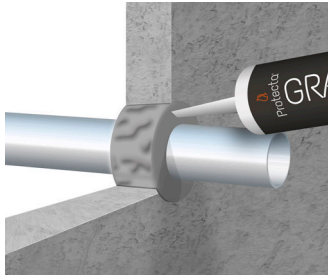
FR IPT

Based on an innovative new Inert Polymer Technology, Protecta® FR IPT is a high performance, water-based sealant. This product outperforms conventional silicone, MSP, butyl and acrylic based products as a sealant, and is uniquely free from VOC's and emission free.

Tested as an acoustic and linear joint seal for fire resistance up to EI240 in joints of up to 30mm wide, the sealant offers 25% movement capability required for dynamic movement within construction joints. Extremely durable, the product offers in excess of 25-year service life



Fire stopping of small gaps (10 - 30mm wide)



FR Graphite

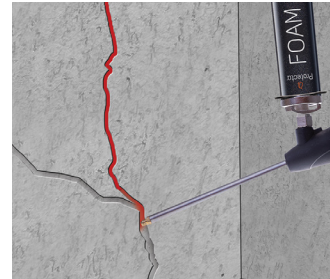
Protecta® FR Graphite is a specialised, water based, graphite filled, high expansion sealant.

Unlike traditional Intumescent sealants, Protecta® FR Graphite expands extensively when subjected to heat and closes around combustible pipes and combustible insulation, i.e. Elastomeric which can melt and burn out.

Tested in gypsum board or masonry walls and concrete floors, the sealant offers fire resistance up to EI 240 with plastic pipes (UPVC, PE and PP) with diameters up to 160mm.

Ideal for use with plastic pipes and metal pipes lagged with combustible insulation which have been passed through compartment walls and floors in core drilled holes with annular gaps (10 – 30mm wide).

As with all Protecta products, FR Graphite is CE marked and offers a service life in excess of 30 years.



FR Foam

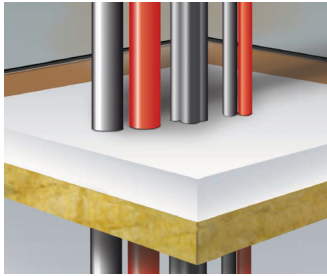
FR Foam is a one-part PU foam which cures by moisture absorption and contains fire retardant additives.

Solely intended as a linear joint seal in masonry or concrete walls, FR Foam can be used in conjunction with FR IPT Sealant facing or without.

The system offers fire resistance of up to EI 240 in joints up to 20mm wide in static construction joint.



Fire stopping of large gaps (greater than 30mm wide)



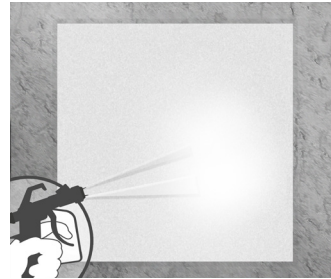
EX Mortar

Protecta® EX Mortar consists of a dry white powder of inorganic compounds and perlite. When mixed with water the compound forms a highly thermal insulating fire seal, which prevents the spread of fire and smoke through openings in fire rated walls and floors.

EX Mortar has been subjected to the most stringent testing for approval as both service penetration fire stop and load bearing seal.

The system offers excellent acoustic performance and fire resistance for up to EI 240 in gypsum board or masonry walls and concrete floors with large individual cables, cables bundles, a wide variety of pipes ranging from plastic to steel, copper and alupec, whether insulated or un-insulated.

Quick and cost effective to install, EX Mortar has a service life in excess of 30 years.



Waterproofer

Protecta® Waterproofer is a cream-like, VOC-free impregnating agent based on alkyl-alkoxy-silanes. It provides long-lasting and reliable water repellence for mineral substrates that exhibit a minimum amount of absorption capacity including Protecta® EX Mortar, brickwork concrete, plaster and façades.

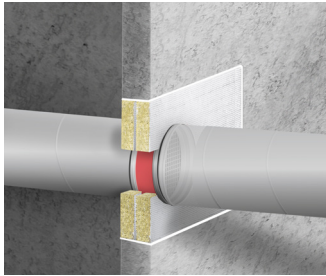
Its comprehensive design protects against efflorescence and destruction by water soluble pollutants, frost damage and the attack of micro-organism.

The Waterproofer can be applied by rolling or brushing onto the surface. Due to its creamy character, a simple, drip-free application can be achieved in one step, without any loss or running of materials.

A single application to very dense, high quality concrete has a coverage rate of 1m² per 200g.



Fire stopping of large gaps (greater than 30mm wide)



FR Damper

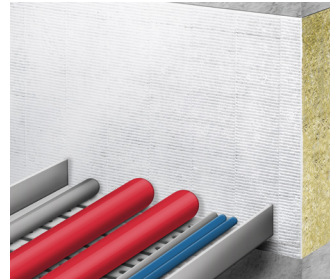
Used to firestop ventilation duct penetrations in fire resistance walls and floors, Protecta FR Damper® is available in rectangular or circular form, and requires no mechanical or external device to operate as they rely solely on an internal reaction initiated by heat. Significant cost savings are made long term with no requirement for maintenance once installed, unlike mechanical and electrical activated dampers.

In a fire, Protecta® FR Damper will rapidly expand to completely block the duct or opening, thus preventing the further passage of fire, smoke and hot gases. The damper can be installed within Protecta fire seal systems in walls and floors.

Based on the 'close in and pull out' principle / solution – prevents the spread of fire by closing off the fire inside the fire compartment, and uses the ventilation system outside the area of the fire to pull out any smoke that filters out through the fire compartments constructions.

Protecta® FR Dampers should be used in all ventilation duct penetrations in fire compartments and fire walls. The dampers will close off the fire compartment (but not in the parts of the building that are not on fire).

The active material encased within Protecta® FR Dampers has a service life of 50 years plus.



FR Board

Designed to maintain the fire resistance of separating walls/floors where they are breached by single or multiple building services. FR Boards consist of a rigid stone wool core, sealed with Protecta® FR Coating on either one or both faces. The coating provides an important barrier to the passage of fire, smoke and hot gases through the thickness of the board; reducing the rate at which the seals heats up on the non-fire side.

The FR Board system is used in conjunction with FR Acrylic to seal all joints and around service penetrations in the seal.

Protecta® FR Boards can be installed within plasterboard wall constructions without time consuming framing of apertures. The flexibility afforded to the contractor with either friction fit or pattress installations are quick and easy, reducing installation time and labour costs

Offering up to EI 240 fire resistance, the boards are tested and approved for a wide range of services types and installations. Service penetrations including cables bundles, large individual cables, pipes (plastic, steel, copper and alupex insulated or uninsulated) have been tested within plasterboard, masonry walls and concrete floor constructions.

The FR Board system makes a major contribution in reducing room to room air borne sound transmission. Durability is a key consideration to the design of fire stop seals, with the FR Board system offering in excess of 25-year service life.



Fire stopping accessories

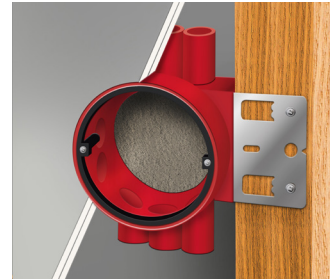


FR Pipe Wrap

Protecta® FR Pipe Wraps consist of a graphite material, within a flexible plastic sleeve that reacts to heat, expanding to fill the void created by the melting plastic through-penetration. It can be used with plastic pipes (PVC-C, PVC-U, PP, PE, PE-HD, ABS and SAN+PVC), bundles of plastic pipes – with or without cables, and metal pipes with penetrating combustible insulation.

Fitted by wrapping around the through-penetration and securing with the adhesive tape, then casting into the wall or floor construction fitted in either Protecta® FR Board or Protecta® EX Mortar.

Available in two different types, ready-made for most common diameters and in 25 metre rolls for all diameters. FR Pipe Wraps offer fire resistance up to 240 minutes for both integrity and insulation, with a 30-year service life.



FR Graphite Plate

Protecta® FR Graphite Plate is a pre-formed self-adhesive intumescent plate, used to reinstate the fire resistance performance of flexible wall constructions, when punctured with plastic wall boxes. It is used where the walls have been provided with apertures for the penetration of conduits and cables into socket boxes, on one or both sides of the wall.

The graphite plate immediately reacts to the heat of the fire and automatically expands and fills up the box, preventing fire and smoke from passing through. Fitting FR Graphite Plate will reinstate the fire resistance performance of flexible wall constructions for at least 60 minutes. It also prevents the passage of smoke and fire through the electrical conduits between socket boxes.

Available in circular and square plates, the product offers fire resistance up to EI 120, with a 50 year plus service life.

The product is available in pre-formed plates that fit the electrical boxes from the following manufacturers:

- ELKO
- SCHNEIDER
- ABB
- RUTAB
- LK FUGA



Fire stopping accessories



FR Putty Pads

FR Putty Pads offer an easy and cost-effective method to upgrade the fire and acoustic performance to gypsum board walls, where they have been breached with single and double electrical socket (patress) boxes for fire resistance up to EI 120.

The pad is supplied as a self adhesive, non-setting putty hand in pre shaped mouldable pads which are push-fit into or wrapped around the box.

For tap water wall boxes, Protecta® FR Putty Pads will reinstate the fire rating of a dry lining partition wall for EI 90.

The putty is VOC free and offers over 50 years service life.



FR Service Transit

FR Service Transits offer future proof fire stopping. New service installations can be added, or redundant service installations can be removed without breaching the fire stop installation – one of the biggest issues within an occupied building.

Consisting of a circular high temperature resistant plastic tube containing a graphite based intumescent lining material. This material expands upon heating to seal spaces or voids around cables and pipes, preventing the passage of flames, smoke and gases. After installation of the Service Transit, cables and pipes can be retrofitted without having to install a new fire seal.

Available in three different lengths, 150mm, 250mm and 400mm to suit different wall and floor thicknesses. The product has been tested in gypsum board / masonry walls and concrete floors for up to EI240 with PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC and PP pipes plus individual cables and bundles.

With a minimum service life of 30 years, the system offers a truly manageable fire risk system.



Paints and coatings



Interior Paint FR-1

Protecta® Interior Paint FR-1 is a water based intumescent acrylic paint for walls and ceilings. It is simply used as conventional water based paints, providing a durable, smooth, non-reflective finish. Our easy to apply formula is available in 28 decorative shades, from classic white to a wide range of contemporary neutrals.

Ideal for use in communal areas such as public buildings, schools and hospitals, on broad walls and timber. Unlike standard decorative paint, Interior Paint FR-1 insulates against heat and prevents the spread of fire.

The paint can be applied using a brush or roller leaving 2 to 4 hours between coats to achieve the desired thickness. Spray equipment can also be used for faster results, for example, Graco X-Force Spray Gun, with a tip size 17-21 thou. It has a coverage rate of 2.7m² per litre and offers excellent fire resistance.

Available in 3 litre and 10 litre pails, and in 28 modern colours, to provide a decorative and protective finish.



Steel Paint FR-1

Protecta® Steel Paint FR-1 is a single component acrylic paint for loadbearing structural steel. Formulated with fire and heat resistant chemicals, combined with high intumescent pigments and fillers, Steel Paint FR-1 provides optimal resistance against fire for up to 60 minutes.

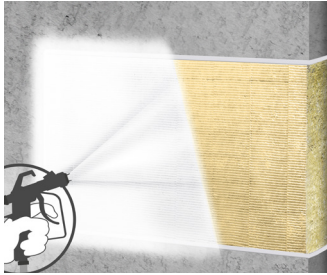
Steel Paint FR-1 is formulated to the highest specification, providing a smooth, rich and non-reflective finish to steel surfaces. Our easy to apply formula normally requires no topcoat and is available in 28 decorative shades, from classic white to a wide range of contemporary neutrals.

The paint is designed for application by airless spraying with a tip size 17-21 thou but is also suitable for brush or roller application. Extremely durable and robust, the product offers a service life in excess of 12 years.

Available in 20 litre pails and in 28 modern colours, to provide a decorative and protective finish to structural steel surfaces.



Paints and coatings



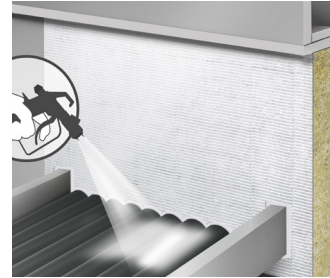
FR Coating

Protecta® FR Coating is a water-based spray grade, ablative sealant coating designed to enhance, seal and fire protect stone wool fibres. The paint is formulated with durable polymer system, inert fillers, non-halogenated fire retardants and a preservative to resist microbial attack.

Intended to be applied by spraying directly onto mineral fibres, the coating dries to give a sound, flexible white surface finish. The cured sealant coating reduces delamination of stone wool fibres.

Achieved by significantly reducing the permeability of the mineral fibre core and releases chemically bound up water, reducing the flow of hot gases, which helps to maintain lower temperatures on penetrating services and the unexposed side of the seal.

The air-tight seal enhances the acoustic performance of the seal, by reducing through the seal.



Service Coating FR-1

Protecta® Service Coating FR-1 is a water-based intumescent coating for the fire protection of critical use cables i.e. hospitals and power stations. The coating upgrades the insulation and integrity of the cable run, which generally have combustible sheaths.

This product is user friendly and is non-toxic, containing nearly zero VOC's.

Approved with low wet film thicknesses, Protecta® Service Coating FR-1 is a one coat system and will offer a service life in excess of 12 years.



Application overview

Type of penetration	Seals without penetrations						Cables						Steel pipes	Copper pipes	Alupex pipes	ventilation ducts	Plastic Pipes													
	30mm	50mm	100mm	300x300mm	1200x2400mm	1200x600mm	≤Ø 21 single	≤Ø 21 bundled	≤Ø 50 single	≤Ø 50 bundled	≤Ø 80 single	≤Ø 80 bundled	Trays & ladders	Without insulation	≤Ø 325	Without insulation	≤Ø 54	Without insulation	≤Ø 75	≤1.2m x 1.7m	≤Ø 1250	≤Ø 32	≤Ø 40	≤Ø 75	≤Ø 110	≤Ø 160	≤Ø 400	Conduits	PEX pipe-in-pipe	
FR PUTTY CORD	x	x	x	x	x	x	√	√	√	√	√	√	x	√	√	√	√	√	√	√ ²⁾	√ ²⁾	x	x	x	x	x	x	x	x	x
FR COLLAR	x	x	x	x	x	x	√	√	√	√	√	√	x	x	x	x	√	x	x	x	√	√	√	√	√	√	√	x	√	
FR ACRYLIC	√	√	√	√	x	x	√	√	√	√	√	x	√	√	√	√	√	√	√	√ ²⁾	√ ²⁾	√	√	√	x	x	x	√	√	
FR GRAPHITE	x	x	x	x	x	x	√	x	x	x	x	x	√	x	x	x	x	x	x	x	x	√	√	√	√	√	√	x	√	x
FR IPT	√	x	x	x	x	x	x	x	x	x	x	x	√	x	√	x	√	x	x	x	x	√	x	x	x	x	x	x	x	x
FR FOAM	√	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EX MORTAR	√	√	√	√	√	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√ ²⁾	√ ²⁾	√	√	√ ¹⁾	√ ¹⁾	√ ¹⁾	√ ¹⁾	√ ¹⁾	√	√ ¹⁾
FR BOARD	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√ ²⁾	√ ²⁾	√	√ ¹⁾	√ ¹⁾	√ ¹⁾	√ ¹⁾	√ ¹⁾	√ ¹⁾	√	√ ¹⁾
FR PIPE WRAP	x	x	x	x	x	x	x	x	x	x	x	x	x	x	√	x	√	x	√	x	x	√	√	√	√	√	√	√	√	√
FR SERVICE TRANSIT	x	x	x	x	x	x	√	√	√	√	√	√	x	x	x	x	x	x	x	x	x	√	x	x	x	x	x	x	√	x
FR DAMPER	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	√	√	x	x	x	x	x	x	x	x	x

√ = Yes x = No ¹⁾ With Protecta® FR Pipe Wrap. ²⁾ With Protecta® FR Damper.



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