

# PRODUCT PORTFOLIO

Passive Fire Protection





# 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.

With over 25 years of experience, our UK and European chemists, engineers and technicians continue to lead the field in research, development and manufacturing – 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. And 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.

To ensure all Protecta® products meet the strict requirements of today's construction projects, we are committed to on-going testing and development programmes in co-operation with major laboratories. Based in the UK and Norway, our state-of-the-art facilities allow us to regularly test and innovate our products, ensuring the highest quality is delivered every time.

Our dedicated after sales support service makes our customers lives easier. Comprehensive product training, expert technical advice and on-site guidance equips our customers with everything they need to get the job done efficiently and effectively. We are committed to creating safer environments for all - that's why we work with fire installers from all over the world to educate on how to achieve fire safety compliance.

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



ISO 9001



ISO 14001





# Rely on Protecta<sup>®</sup>

The most trusted name in Passive Fire Protection



## Proven

Highest quality firestopping products you can trust to perform.  
Extensive testing evidence covering multiple scenarios.  
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 to 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

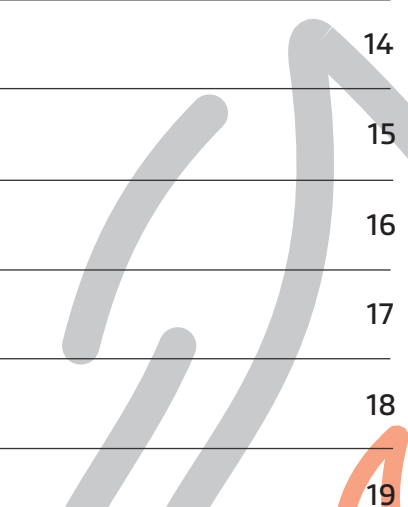
Responsive customer service ensures problems are minimised.  
Expert advice and technical back-up always available to aid problem-solving.  
Free on-site guidance and training if required.



# Contents

---

Protecta® Eco-Foil System	1
Protecta® FR Acrylic	2
Protecta® FR Graphite	3
Protecta® FR IPT	4
Protecta® FR Board	5
Protecta® EX Mortar	6
Protecta® FR Service Transit	7
Protecta® FR Collar	8
Protecta® FR Pipe Wrap	9
Protecta® FR Graphite Plate	10
Protecta® FR Damper	11
Protecta® Interior Paint FR-1	12
Protecta® Steel Paint FR-1	13
Protecta® FR Coating	14
Protecta® Service Coating FR-1	15
Protecta® Waterproofer	16
Protecta® FR Putty Pads	17
Protecta® FR Putty Cord	18
Application Overview	19





## NEW Protecta® Eco-Foil System

Our new and innovative Eco-Foil system is cost effective, efficient and designed to minimise waste.

The system works by inserting a 300ml foil into the reusable Eco-Cartridge, which fits into a standard skeleton gun. The cartridge has a double-ended plunger, so once the foil is empty, remove the cap and nozzle and re-fill the opposite end with a new 300ml foil. Simply replace the cap and nozzle at the opposite end and the system is ready for use!

Products available in the new Eco-Foil range:

- Protecta® FR Acrylic 300ml in boxes of 25 foils
- Protecta® FR Graphite 300ml in boxes of 25 foils
- Protecta® FR IPT 300ml in boxes of 25 foils
- Eco-Cartridges (empty) in boxes of 12 pieces
- 300ml foil gun, per piece



**Can be reused  
a minimum of 60 times**



**The system fits into a  
standard skeleton gun**



**Less waste to  
dispose of on site**



**6 months longer shelf life than  
the same product in a cartridge**





# Protecta® FR Acrylic

## Fire rated mastic

### General description

Protecta® FR Acrylic is the top selling fire rated mastic in our selection of products. The reason is that it has been developed and tested so that it can be used in nearly all fire-stopping situations with very few exceptions. This avoids the need to carry many different mastics with you on the construction site. In addition, this mastic is used in combination with Protecta® FR Board. This, combined with the best fire rating in the market makes the product unique.

Protecta® FR Acrylic is tested with many different types of penetrations through many different constructions. It is intumescent and closes the gap even after plastic pipes burn away.

### Main uses

Protecta® FR Acrylic is designed to prevent the spread of fire and smoke through joints and openings in fire rated walls and floors, including openings formed around building service penetrations.

### Features

- High-end formula, certified in most countries worldwide
- Classified for fire sealing all types of constructions such as drywalls, masonry walls, concrete walls and rigid floors
- Tested for fire stopping of service penetrations in cross-laminated timber walls and floors
- Very high sound insulation
- Low emissions - environmentally and user friendly
- Simple to apply with a smooth surface finish
- Permanently flexible – will accommodate movement up to 12.5%
- No priming necessary for application to most materials
- Suitable for most surfaces, including concrete, masonry, steel, gypsum, glass, plastics and most non-porous surfaces
- Hardens quickly, tack free after 1 hour (the fire performance specification of the joint filler has been derived when the joint filler has been let to cure for a month)
- 18 months storage time (under correct conditions)
- 30 years working life

### Ratings

#### Sound rating:

- Rw 62dB - Single sided seal  $\geq 12$ mm depth.
- Rw >62dB - Double sided seal  $\geq 12$ mm depth.

#### Fire rating:

- Up to 4 hours depending on application.



### Technical data

Condition	Ready for use, acrylic based filler
Specific gravity	1.56 – 1.60
Flash point	None
Reaction to fire	Class B-s1, d0
Air permeability	Air, smoke and gas tight tested to EN 1026: 2016
Expansion in fire	1 : 2-3
Non-sticky	Max. 75 minutes
Film forming	Max. 25 minutes
Totally hardened	3 to 5 days depending on thickness and temperature
Flexibility	12.5% according to ISO 11600
Durability	Z2 intended for use in internal conditions with humidity classes other than Z1, excluding temperatures below 0 °C
BWR 3	Use category IA1, S/W3
Thermal conduct.	0.845 W/mK (+/- 3%) @ 20mm depth
Storage	18 months stored in unopened cartridges. To be stored in temperatures between 10°C and 30°C
Working life	30 years
Service temp.	-20 to +70°C
Application temp.	+5 to +30°C
Compatibility	Suitable for use with most materials, but should not be used in direct contact with bituminous materials
Limitations	Should not be used in permanently damp areas or in joints with high movement
Classification	CE-marked - Sealant for fire rated joints and penetrations class EI 240
Standard colours	Standard white, pure white, grey or red
Colour codes	White: RAL 9002 / NCS S1002-Y Grey: NCS: S5500-N
Packaging	Box containing 25 cartridges each 310 ml Box containing 25 foils each 300 ml Box containing 12 foil packed each 600 ml Pallets 310 ml: 64 boxes per pallet equals 1600pcs Pallets 600 ml: 91 boxes per pallet equals 1092pcs

### Certificates





# Protecta® FR Graphite

Water based fire classified sealing compound

## General description

Protecta® FR Graphite is a water based fire classified sealing compound that contains a high concentration of heat expanding graphite material.

This compound may be used in more extreme transits than FR Acrylic, for example, cable trays to EI 180 and plastic pipes Ø110mm. Protecta FR Graphite expands when it is subjected to fire and closes openings around penetrations when any combustible or low temperature melting materials have burnt away. Protecta® FR Graphite is designed to fire seal difficult services which traditional fire rated mastics do not achieve such as large plastic pipes.

## Main uses

The intended use of Protecta® FR Graphite is to reinstate the fire resistance performance of flexible and rigid wall, and floor constructions where they are penetrated by various steel and plastic pipes, cables with and without cable trays.

## Features

- Classified in most constructions for plastic pipes and cables
- Easy to apply
- High sound insulation
- Low emissions - environmentally and user friendly
- Permanently flexible – will accommodate movement up to 12.5%
- No priming necessary for application to most materials; see the installation instructions for further details
- Suitable for most surfaces, included concrete, bricks, Leca, steel, wood, gypsum, glass, PVC and most non-porous surfaces
- Hardens quickly, tack free after 1 hour
- The fire performance specification of the joint filler has been derived when the joint filler has been allowed to cure for 30 days
- Minimum 12 months storage time
- 30 years working life

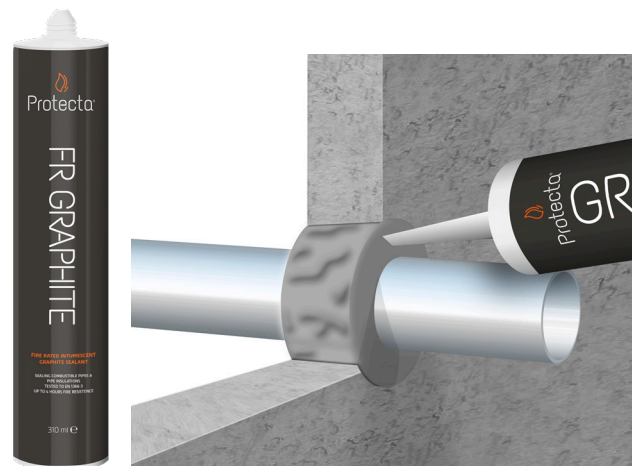
## Ratings

### Sound rating:

- Rw 53 dB - Single sided seal  $\geq$  25mm depth.
- Rw > 53 dB - Double sided seal  $\geq$  25mm depth.

### Fire rating:

- Up to 4 hours depending on application.



## Technical data

Condition	Ready for use, water based graphite filler
Specific gravity	1.50 – 1.60
pH	8.00 – 9.50
Flash point	None
Expansion rate	Approx. 1 : 25
Non-sticky	60 minutes
Film forming	30 minutes
Totally hardened	3 to 5 days depending on thickness
Flexibility	Low to medium 12.5% according to ISO 11600
Durability/service	Class Z2
Thermal conduct.	0.85 W/mK (+/- 3%) @ 20mm depth
Storage	12 months stored in unopened cartridges. To be stored in temperatures between 5 °C and 30 °C
Working life	30 years
Service temp.	-15 °C to +75 °C
Application temp.	+4 °C to +30 °C
Compatibility	Suitable for use with most materials, but should not be used in direct contact with bituminous
Limitations	Should not be used in permanently damp areas or in joints with excessive movement, joints at floor level or joints below the ground
Classification	CE-marked - Sealant for fire rated penetrations class EI 240
Colour	Dark grey (may turn darker during curing)
Packaging	Box containing 25 cartridges each 310 ml Box containing 25 foils each 300 ml Box containing 12 foil packed each 600 ml Pallets 310 ml: 64 boxes per pallet equals 1600 pcs Pallets 600 ml: 91 boxes per pallet equals 1092 pcs

## Certificates





# Protecta® FR IPT

## Fire rated sealant

### General description

Protecta® FR IPT is a high performance, professional quality, one part ready to use sealant and adhesive. Based on an innovative new Inert Polymer Technology, it is suitable for a wide variety of building trade applications including decorating, flooring, joinery, plumbing and tiling and out-performs conventional silicone, MSP, butyl and acrylic based products as a sealant and adhesive – the only sealant free from dangerous emissions.

### Main uses

Protecta® FR IPT is designed for sealing joints, voids/irregular holes in walls, partitions and other structures, resulting in an airtight and watertight seal. Protecta® FR IPT provides primerless sealing and bonding on a wide range of substrates including: ceramic, plaster, plastics, masonry, wood, stone and metals.

### Features

- Primerless adhesion
- Excellent adhesion to most common substrates
- Dynamic for low and high modulus applications
- 3D joint movement capability minimum 25%
- Can be used for all applications internally
- Fire rated up to 4 hours for both integrity and insulation
- Resistant against radon (radioactive particles)
- Excellent slump resistance
- Only technology available that is VOC-free
- Resistant to mould and mildew
- Low dirt pick up
- Non staining on susceptible surfaces
- Easy to apply and tool off
- Excess can be wiped before curing with a damp cloth
- Paintable
- Low shrinkage
- Does not yellow

### Ratings

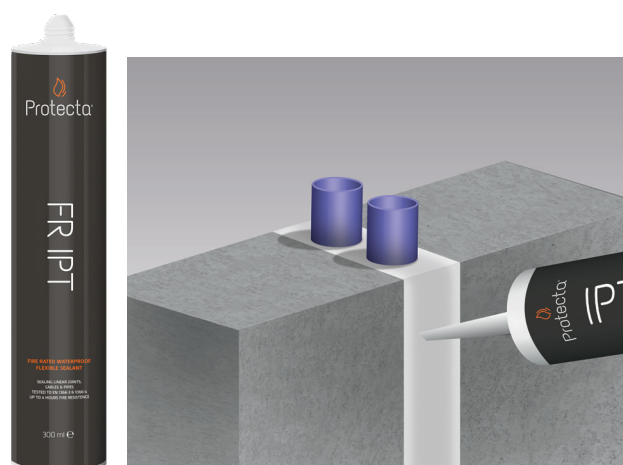
#### Sound rating:

- Rw 62dB - Single sided seal  $\geq 12$ mm depth.
- > Rw 62dB - Double sided seal  $\geq 12$ mm depth.

#### Fire rating:

- Up to 4 hours depending on application.

### Certificates



### Technical data

Form	Ready to use thixotropic paste
Specific gravity	1,54 g/cm <sup>3</sup>
VOC	0 g/l
Durability w/ageing	Type X (UV / water) (pass)
Chemical resist.	Test passed (resistant)
Salt water immersion:	Test passed (resistant)
Microbiolog growth:	0 (no growth)
Hardness	Shore A 47
Shrinkage	15% volume single sided
Tensile properties	3,79 MPa (379 N/cm <sup>2</sup> )
Tensile elongation	270%
3D-tensile prop.	0,24 MPa (24 N/cm <sup>2</sup> )
3D-tensile elong.	106%
Tear properties	50%
Compression resist	434 N / 1569 MPa
Radon resistance	1.5mm thickness IPT gives Z = 2.9 - 108 s/m
Flashpoint	None
Reaction to fire	Classification D-s2, d0
Fire resistance	Up to class EI 240
Tack free time	60 minutes maximum
Skin time	30 minutes maximum
Shelf life	Up to 12 months when stored in unopened cartridges under cool dry conditions and 6 months in opened and resealed cartridges. Avoid temperatures above 35°C & below 5°C
Packaging	300ml cartridge, 300ml foil or 600ml foil.
Colours	A range of colours available. Standard colours are white, light grey, grey, anthracite, brown and black.
Health & safety	No health hazard, indoor hygiene EMICODE EC1 <sup>PLUS</sup> classification, approved for BREEAM rated building projects.



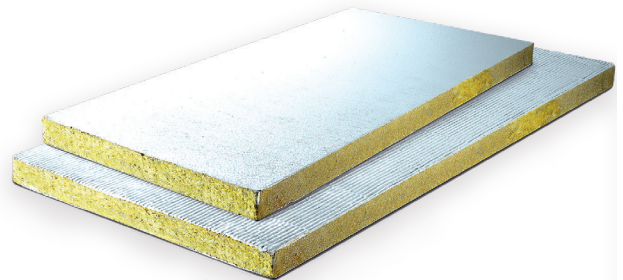


# Protecta® FR Board

Insulation board with fire rated coating

## General description

Protecta® FR Board has been designed to maintain the fire resistance of separating walls/floors where they are breached by single or multiple building services. It consists of a rigid stone wool core, sealed with Protecta® FR Coating on 1 or both faces.



## Main uses

Protecta® FR Board is designed to reinstate the fire resistance performance of flexible wall, rigid wall and floor constructions where they are penetrated by various cables, metallic pipes, composite pipes and plastic pipes.



## Features

- Classified for all types of constructions with or without building service penetrations
- Simple and very quick to install
- Easy to retrofit additional building services after installation
- Permanently flexible - will accommodate movements during fire and smaller movements in the construction it has been fitted within
- Suitable for most surfaces, including concrete, bricks, masonry, steel, wood, gypsum, glass, plastic and most non-porous surfaces
- May be used in unlimited lengths in walls with heights up to 1200 mm and in floors with widths up to 800 mm
- May be installed in gypsum walls with or without framing around the opening
- Halogen-free with added fungicides
- Once fully cured, the board resists UV, humidity and frost
- Protecta® FR Board can be supplied with a smooth surface
- Precautions are required to be taken to prevent a person stepping onto a blank horizontal penetration seal

## Ratings

### Sound rating:

- Rw 55dB - Single 50 or 60mm FR Board 2-S as linear seal ≤ 120mm wide.
- Rw 29 dB - Single 50 or 60mm FR Board 2-S as large seal.
- Rw 52 dB - Double 50 or 60mm FR Board 1-S or 2-S as large seal.
- Rw 53 dB - 50 or 60mm FR Board 1-S or 2-S with 50mm cavity, large seal.

### Fire rating:

- Up to 4 hours depending on application.

## Technical data

Condition	Ready for use, pre-coated boards
Density	Board: 160 kg/m <sup>3</sup> (150 – 170 kg/m <sup>3</sup> ) Coating: 1.3 – 1.4 kg/ltr
Durability	Y <sub>1</sub> - Intended for use at temperatures below 0°C with exposure to UV and humidity but no exposure to rain. Includes lower classes Y <sub>2</sub> , Z <sub>1</sub> and Z <sub>2</sub> .
Flash point	None
Non-sticky	Max. 75 minutes (sealant)
Film forming	Max. 25 minutes (sealant)
Totally hardened	3 to 5 days depending on thickness and temperature
Flexibility	Medium, 12.5%
Thermal conduct.	0.038 W/mK
Storage	May be stored for a long period of time. To be stored in temperatures between 5°C and 30°C
Limitations	If the boards are to be used in permanently humid areas, Protecta® FR Coating should be applied over the sealant
Temperature range	-30°C to +80°C (when hardened)
Installation temp	+5°C to +50°C
Working life	Minimum 25 years if conditions are met
Colour	White surface, green core FR Acrylic: NCS 1202 – Y26R, RAL 9002
Packaging	FR Board 1-S 50x600x1200 mm: 80 pcs per pallet FR Board 2-S 60x600x1200mm: 72 pcs per pallet

## Certificates





# Protecta® EX Mortar

Fire rated expanding mortar

## General description

Protecta® EX Mortar is a dry white powder consisting of inorganic compounds and perlite. When mixed with water the compounds form a highly thermal insulating fire seal to prevent the spread of fire and smoke through openings in fire rated walls and floors, including openings formed to accommodate building service penetrations.

## Main uses

The intended use of Protecta® EX Mortar is to reinstate the fire resistance performance of flexible wall, rigid wall and floor constructions where they are penetrated by various cables and metallic pipes.

## Features

- Classified in walls and floors of concrete, brick, gypsum etc
- Suitable for cables, bundled cables, cable racks, cable trays, steel, copper, alupex and plastic pipes and air ventilation ducts
- Simple to apply, leaving a very smooth finish
- High degree of mechanical resistance; the seal is load bearing without reinforcement
- No priming necessary prior to application in most building material substrates however, metal services in contact with the seal must be corrosion protected
- Suitable for most surfaces, included concrete, bricks, Leca, steel, plastic etc, but not suitable to fitting of doors or in service openings that involve movement
- The product is certified for use in gypsum walls but it is recommended to use Protecta® FR Boards for these applications
- Fully set within 1 hour
- The fire performance specification of the compound has been derived when the seal has been let to cure for 1 month.

## Ratings

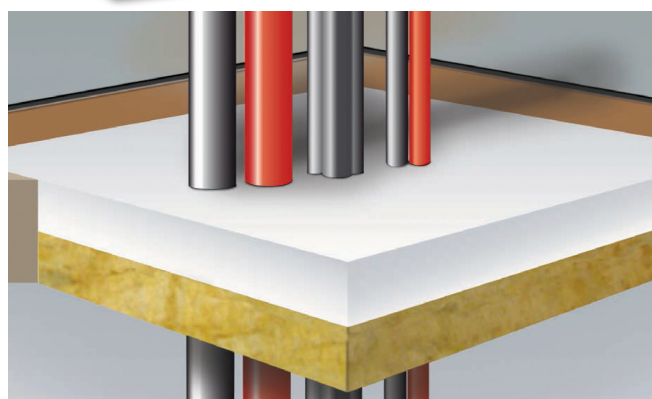
### Sound rating:

- Rw 64 dB - Single sided cast  $\geq 50$  mm thick as linear seal.
- Rw 64 dB - Double sided cast  $\geq 25$  mm thick as linear seal.
- Rw 48 dB - Single sided cast  $\geq 50$  mm thick as large seal.
- Rw 48 dB - Double sided cast  $\geq 25$  mm thick as large seal.

### Fire rating:

- Up to 4 hours depending on application.

## Certificates



## Technical data

Condition	Powder ready for mixing with water
Product consumption at 2:1 mix	Approx. 3.42 bags per m <sup>2</sup> @ 50mm depth Approx. 6.83 bags per m <sup>2</sup> @ 100mm depth
Dry density	About 900 kg/m <sup>3</sup> after full cure
Flash point	None
Reaction to fire	Class A1 according to EN 13501-1
Hardened	Less than 1 hour depending on the local climate
Totally hardened	Up to 30 days depending on thickness and temp.
Flexibility	None
Durability/service	Class Z <sub>2</sub>
Working life	30 years
Thermal conduct	0.051 W/mK
Storage	12 months with storage temperatures between 5°C and 30°C
Compatibility	Suitable for use with most materials, but should not be used in direct contact with metals that may corrode
Limitations	Should not be used in permanently damp areas or in moving joints
Classification	CE-marked – Fire seal for fire rated openings and penetrations class EI 240
Colour	Off-white
Packaging	Bags of 20 litres Pails of 10 litres Bags: 63 on the pallet, equals approx. 800 kg Pails: 72 on the pallet, equals approx. 500 kg



# Protecta® FR Service Transit

Plastic tube with heat expanding material within

## General description

Protecta® FR Service Transit consists of a circular high temperature plastic tube containing a graphite based intumescent lining material which expands upon heating to seal spaces or voids around cables and pipes, thus preventing the passage of flames, smoke and gases.

The Service Transit is available in three different lengths, 150mm, 250mm and 400mm and the selection of which to use depends on the thickness of the supporting construction and the required fireclassification. Certified for PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC and PP pipes plus all kinds of cables up to a certain diameter.

## Main uses

Designed to maintain the fire resistance of walls and floors when these are breached by continuous cables and plastic pipes.

## Features

- Safe, easy and quick way to fire stop service penetrations
- Ideal for installations where it is likely that services will be inserted or replaced in the future
- Ideal for installations in tight spaces where it will be difficult to install a normal fire seal at a later stage in the building construction
- A plug in the middle prevents penetration of cold smoke
- New patented fast expanding graphite material
- For cables, plastic pipes and cables inside plastic pipes (conduits)
- Classified for fire sealing all types of constructions; drywalls, masonry or concrete walls and concrete floors
- Can be fitted several ways; cast in concrete, friction fitted in concrete, masonry or gypsum, or inserted in larger apertures with Protecta® FR Acrylic, FR Board and EX Mortar
- Very high fire classifications, up to 240 minutes for both integrity and insulation
- Certified for PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC and PP pipes plus all kinds of cables up to a certain diameter
- No emissions - environmentally and user friendly
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

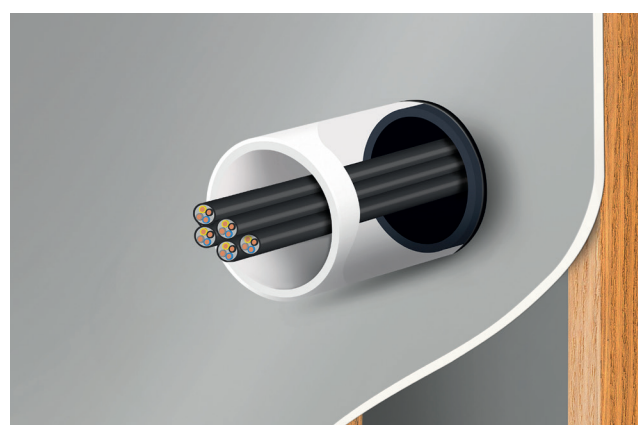
## Ratings

Sound rating:

- Rw 42dB RW - Service Transit in all sizes.

Fire rating:

- 240 minutes for both integrity and insulation.



## Technical data

Technical Approval	ETAG 026-2
Durability according to ETAG 026-2	Z <sub>2</sub> intended for use in internal conditions with humidity classes other than Z <sub>1</sub> , excluding temperatures below 0 °C
Tube	High temperature resistant plastic
Conditioning procedure	EN 13238:2010
Expansion ratio	17:1
Expansion pressure	65.4 N
Colour	White tube with anthracite inlay
Graphite weight	1.4 kg/m <sup>2</sup> per mm thickness
Graphite density	1409 kg/m <sup>3</sup>
Normal expansion time	Less than 2 minutes
Minimum expansion temperature	105 °C
Storage	Store in temperatures between 5°C and 30°C
Life	Under normal conditions; 30 years +
Sizes Available	Ø40 x 150mm, Ø63 x 150mm, Ø90 x 150mm, Ø110 x 150mm, Ø40 x 250mm, Ø63 x 250mm, Ø90 x 250mm, Ø110 x 250mm, Ø40 x 400mm, Ø63 x 400mm, Ø90 x 400mm and Ø110 x 400mm

## Certificates





# Protecta® FR Collar

Ready for use, steel shell with a graphite material

## General description

Protecta® FR Collars consist of a two part, coated circular steel shell that fits around plastic pipes (PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC) plastic pipe bundles – with or without cables, and bundles of cables. The collars have a secure and simple locking device.

The steel shell contains a graphite based material that reacts to heat, expanding in the event of a fire to fill the opening left by the melting plastic of the through penetration. It can be fitted on the outside of a wall or floor, even in single sided applications.

## Main uses

The intended use of Protecta® FR Collar is to reinstate the fire resistance performance of flexible and rigid wall, and floor constructions where they are penetrated by various services.

## Features

- High-end fast expanding patented graphite material, certified worldwide
- Classified for fire sealing all types of constructions and many different building service penetrations including plastic pipes, composite pipes, metal pipes and cable bundles
- Approved plastic pipe sizes range from smallest pipes available to Ø 400mm, each with a wide range of pipe wall thicknesses
- Collars are available in two different heights for different fire classifications to maximise cost efficiency
- Smaller pipes can be fitted within larger collars with the benefit of accommodating pipes that are at an angle, or if the opening around the pipe is too large
- Fire classifications up to 240 minutes for both integrity and insulation
- Tested and certified for U/U pipe end applications
- Very high sound insulation
- Causes no deleterious effects on cPVC pipes like BlazeMaster, supported by mechanical testing evidence
- No emissions - environmentally and user friendly
- Simple to install using widely available standard fixings
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

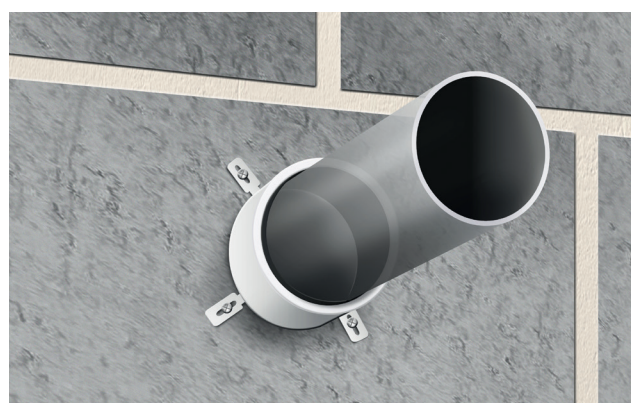
## Ratings

**Sound rating:**

- RW 58 dB - Collars installed as described in walls.

**Fire rating:**

- 240 minutes for both integrity and insulation.



## Technical data

Condition	Ready for use, steel shell with a graphite material
Shell	Powder coated 1mm steel
Conditioning procedure	EN 13238:2010
Expansion ratio	17:1
Expansion pressure	65.4 N
Colour	White/red shell with anthracite inlay
Graphite weight	1.4 kg/m <sup>2</sup> per mm thickness
Graphite density	1409 kg/m <sup>3</sup>
Normal expansion time	Less than 2 minutes
Minimum expansion temperature	105 °C
Storage	May be stored for a long period of time. To be stored in temperatures between 5°C and 30°C
Life	Under normal conditions; 30 years +
Sizes Available	Ø32mm/30mm, Ø32mm/50mm, Ø40mm/30mm, Ø40mm/50mm, Ø55mm/30mm, Ø55mm/50mm, Ø63mm/30mm, Ø63mm/50mm, Ø75mm/30mm, Ø75mm/50mm, Ø82mm/30mm, Ø82mm/50mm, Ø90mm/30mm, Ø90mm/50mm, Ø110mm/30mm, Ø110mm/50mm, Ø125mm/60mm, Ø140mm/60mm, Ø160mm/60mm, Ø200mm/75mm, Ø250mm/75mm, Ø315mm/75mm, Ø400mm/100mm.

## Certificates





# Protecta® FR Pipe Wrap

## Fire rated Pipe Wrap

### General description

Protecta® FR Pipe Wrap is 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.

### Main uses

The intended use of Protecta® FR Pipe Wrap is to reinstate fire resistance performance of flexible wall constructions, rigid wall constructions and rigid floor constructions where they are penetrated by various metal pipe services. They can be used with and without combustible insulation and plastic pipes when used in combination with Protecta® EX Mortar and Protecta® FR Board.

### Features

- For plastic pipe sizes from smallest pipes available to Ø400 mm with a wide range of pipe wall thicknesses
- For metal pipes with continuous combustible pipe insulation
- For plastic pipes with cables (conduits)
- Pipe wraps comes in two different types; ready made for most common diameters and in 25 metre rolls for all diameters
- Fire classifications up to 240 minutes for both integrity and insulation
- Certified for PVC-U, PVC-C, PE, LDPE, MDPE, HDPE, ABS, SAN+PVC and PP pipes
- Tested and certified for U/U pipe end applications
- Classified for fire sealing in all types of constructions
- Excellent sound insulation
- No emissions - environmentally and user friendly
- Simple to install in both Protecta® FR Board and EX Mortar
- Unlimited storage time (under correct conditions)
- 30 years working life guarantee

### Ratings

#### Sound Rating:

- 55 dB RW - Pipe Wraps installed in FR Board.
- 64 dB RW - Pipe Wraps installed in EX Mortar.

#### Fire rating:

- Up to 4 hours depending on application.



### Technical data

Technical Approval	ETAG 026-2
Durability according to ETAG 026-2	Z <sub>2</sub> intended for use in internal conditions with humidity classes other than Z <sub>1</sub> , excluding temperatures below 0 °C.
Conditioning procedure	EN 13238:2010
Expansion ratio	28:1
Expansion pressure	55 N
Colour	Anthracite
Graphite weight	1.3 kg/m <sup>2</sup> per mm thickness
Graphite density	1300 kg/m <sup>3</sup>
Normal expansion time	Less than 10 minutes
Minimum expansion temperature	150 °C
Storage	Store in temperatures between 5°C and 30°C
Life	Under normal conditions; 30 years +
Sizes Available	55mm, 82mm, 110mm, 125mm, 160mm, 200mm, 250mm, 315mm, 50mmx25m, 75mmx25m

### Certificates





# Protecta® FR Graphite Plate

Preformed self-adhesive intumescent plate for wall boxes

## General description

Protecta® FR Graphite Plate is a preformed 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 fire through the heat and automatically expands and fills up the box, preventing fire and smoke from passing through. Fitting Protecta® 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.

Protecta® FR Graphite Plate is available in both circular and square plates.

## Main uses

The Graphite Plate immediately reacts to fire through the heat and automatically expands and fills up the box, preventing fire and smoke from passing through.

## Features

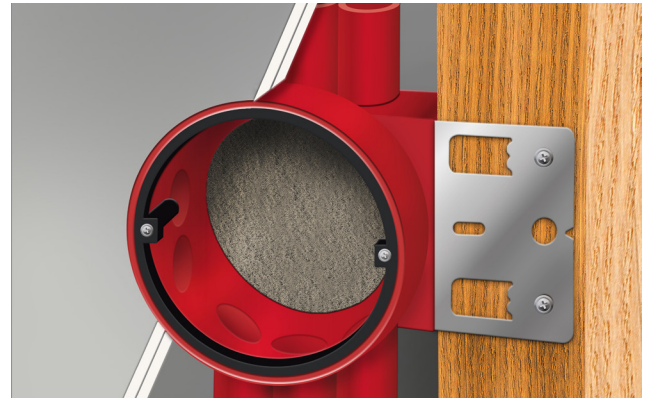
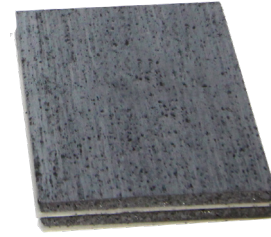
- Wall boxes can be fitted back to back
- Up to 120 minutes of both integrity and insulation resistance
- Quick and easy to install
- For flexible walls with a minimum thickness of 75 mm
- Can be used on insulated and uninsulated walls
- Tested with a wide range of cables and conduits interconnected between boxes
- Tested with empty conduits between boxes for future cable transits

## Ratings

Fire rating:

- Up to 120 minutes for both integrity and insulation.

## Certificates



## Technical data

Technical Approval	ETAG 026-2
Fire Test - EN13501-2	EI 30 - 120
Durability - ETAG 026-2	Z <sub>2</sub> intended for use in internal conditions with humidity classes other than Z <sub>1</sub> , excluding temperatures below 0°C.
Conditioning procedure	EN 13238:2010
Expansion ratio	17:1
Expansion pressure	65.4 N
Colour	Light grey with silver flecks
Texture	Textured surface
Finish	Matt finish on one side, other side satin finish
Thickness	Approximately 3.8mm
Weight per unit area/ length	5.1 Kg/m <sup>2</sup>
Density	1,409 Kg/m <sup>3</sup>
Optimum expansion time	2 minutes
Optimum expansion temperature	550° C
Usage	Supplied ready to fit, normally one plate is required per electrical socket box
Packaging	Supplied packed in boxes, normally 10 plates per box
Storage	Store in temperatures between 5°C and 30°C
Life	Under normal conditions; 50 years +



# Protecta® FR Damper

Ventilation duct with fire stopping properties

## General description

Protecta® FR Damper is used to fire proof ventilation ducts where they penetrate fire rated constructions such as fire compartments and fire walls, preventing the passage of fire and smoke both surrounding and inside the ventilation duct.

The product consists of a steel casing containing horizontal steel blades treated with a technically advanced heat expanding graphite which closes off the whole damper in a fire. The aperture surrounding the dampers are fire sealed with Protecta® FR Board in walls and Protecta® EX Mortar in floors.

## Main uses

Designed to fire seal ventilation ducts passing through fire rated walls and floors.

## Features

- Maintenance free and no electrical connections necessary
- The same damper can be installed in both walls and floors
- It seals against penetration of fire and smoke, both surrounding and inside the ventilation duct
- Closes in the area where the fire is located but not elsewhere, so the ventilation system can be used to extract smoke from areas that are not on fire
- Keeps the temperature in the duct network lower than 120°C and will therefore protect fans and sensitive units in the system
- Insulation of ducts is not necessary
- Service life of more than 50 years; the damper will last the same life cycle as the ventilation system
- The dampers are designed to fit standard ducting equipment so that the ducting system installer can easily fit the dampers
- The dampers are attached to the inside of the ducts, giving the benefit of space saving
- An aperture can include several dampers and in addition technical services such as cables, cable trays and pipes
- The dampers are only 15 cm long and bends can be connected right behind the fire seal (can also be special ordered in other sizes).
- The damper can be attached to a vent on one side

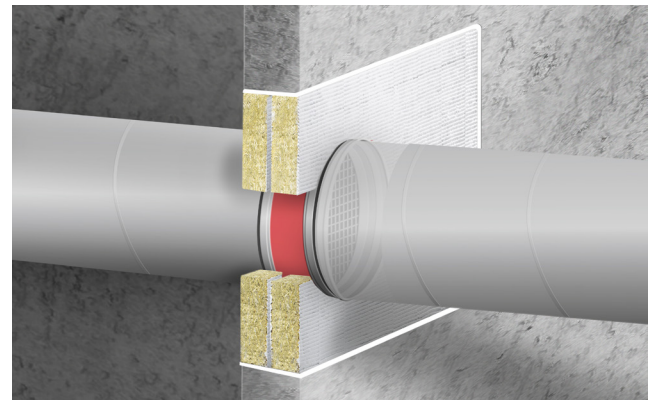
## Ratings

### Sound Rating:

- = Rw 67 dB - FR Putty Cord in wall or floor.
- > Rw 62 dB - FR Acrylic in wall or floor.
- = Rw 52 dB - FR Board in wall.
- > Rw 48 dB - EX Mortar in floor.

### Fire rating:

- Up to 120 minutes for both integrity and insulation.



## Technical data

Appearance	Ready manufactured in steel and graphite
BREEAM	Approved, EC1 <sup>PLUS</sup> on all fire seals
Interior climate, installed	Z <sub>2</sub> ; Relative air moisture up to 85% and temperatures between 5 and 40 °C
Trigger-temperature in fire	100 °C
Temperature, full closure	160 °C
Time to full closure	From 50 seconds to 2 minutes
Expansion rate graphite	15.5 to 17
Density graphite	2.6 kg per ltr
Thickness graphite	1.6 mm
Leakage classification	Class C according to EN 1751 (circular)
Free air opening	Between 84.2% and 85.4%
Pressure in fire	FR Damper resists minimum 300Pa
Standard for connections	EN 1506:2007
Standard for fire testing	EN 1366-12:2014 & EN 1363-1:2012
Standard for aerodynamics	EN 1751:2014
Standard for sound levels	EN ISO 5135:1998
Flash point	None
Storage	In temperatures between 5°C and 30°C
Life span	Under normal conditions; 50 years +
Installation temperature	+5 °C to +50 °C
Colour	Galvanized steel with section of red colour to identify placement of the fire seal
Packaging	1 damper per box

## Certificates





# Protecta® Interior Paint FR-1

Acrylic based intumescent paint

## General description

Protecta® Interior Paint FR-1 is a decorative paint with special properties to protect against spread of fire and protect people's health against harmful chemicals. It is a hard-wearing interior acrylic paint, formulated to the highest specification and offering unsurpassed intensity of colour.

All colours are water-based and provide a smooth, rich and non-reflective finish. It is perfect for a contemporary look and to hide surface imperfections. Protecta® Interior Paint FR-1 is a one-layer system that normally requires no primer, no top coat, is easy to use and very easy to clean up.

## Main uses

Ideal for use in communal areas (e.g. public buildings, schools and hospitals) on broad walls and timber as it insulates against heat and prevents the spread of fire unlike conventional paint systems.

## Features

- Fire resistant - protecting your homes, schools, hospitals etc
- Non-toxic & emission-free
- Durable, robust and designed to last
- Excellent coverage, saving time and money

## Ratings

Fire rating:

- Up to 30 minutes depending on application.

## Certificates



## Technical data

Type	Acrylic based intumescent paint
Cure system	Water loss
Health and safety	Non-hazardous
Tests standards	EN 13823 and EN ISO 11925
Classification standards	EN 13501-1 and Regulation (EU) 2016/364
Colours	Available in 28 decorative colours, including white
Specific gravity	1.40g/cm <sup>3</sup>
Solids (theoretical)	70%
VOC	0.0001 g/L
Touch dry	1 hour at ~22°C & 50% RH
Hard dry	1.5 hour at ~22°C & 50% RH
Application conditions	Minimum +10°C and humidity lower than 80%
Temperature range	-30°C to +80°C (when hardened)
Durability	Type Z <sub>2</sub> internal conditions with humidity lower than 85% R.H, excluding temperatures below 0°C
Shelf life	Up to 6 months when stored in cool dry well ventilated areas between +20 and +25 °C
Work life	12 years
Packaging	10 litre pails, 200 litre drums, 1000 litre IBCs





# Protecta® Steel Paint FR-1

Acrylic paint for fire protection of structural steel

## General description

Protecta® Steel Paint FR-1 is a single component acrylic paint, used for up to 60 minutes fire protection of loadbearing structural steel that normally requires no primer, no top coat, is easy to use and very easy to clean up.

The paint is formulated with fire and heat resistant chemicals, combined with high intumescent (expanding) pigments and fillers, which gives optimal resistance against fire. The paint is formulated to provide the lowest emissions possible, protecting both people's health and the environment against harmful chemicals.

It is a hard-wearing interior acrylic paint, formulated to the highest specification and offering unsurpassed intensity of colour. All colours are water-based and provide a smooth, rich and non-reflective finish. It is perfect for a contemporary look and to hide surface imperfections.

## Main uses

Protecta® Steel Paint FR-1 can protect all common steel section sizes including hollow sections. Suitable for internal and external use.

## Features

- Available in 28 decorative colours, including white
- Fire resistance for up to 60 minutes
- Designed for loadbearing structural steel
- Non-toxic & emission-free with near-zero VOC, protecting people's health
- Halogen-free with added preservatives that resist bacterial and fungal growth
- Durable, robust and designed to last
- Easy to apply via airless spray, brush or roller
- Excellent coverage
- Suitable for exterior use with a topcoat
- Service life in excess of 12 years

## Ratings

Fire rating:

- Up to 60 minutes depending on application.

## Certificates



## Technical data

Condition	Single component acrylic intumescent paint. Ready for use
Colour	White base plus 28 decorative, water-based colours. See separate Colour Chart.
Density	Approx. 1.43 kg/ltr
Durability	Z2; intended for use in internal conditions with humidity classes other than Z1, excluding temperatures below 0 °C (C1 or C2 according to EN ISO 12944-2). Higher classes achievable with top-coat.
Volume solids	72.6 % (ASTM D2369)
V.O.C.	< 1 g/L (below limit of detection) (ASTM D2369)
Application method	Spray, brush, roller
Dilution	Preferably not. Max 10% water.
Storage	6 months stored in unopened containers. To be stored in temperatures between 5 °C and 25 °C protected against frost and direct sunlight.
Temperature range	-30°C to +80°C (when fully cured, up to 4 weeks)
Installation temp.	+5°C to +50°C
Working life	Minimum 12 years if conditions are met
Test standard	Loadbearing structural steel: EN 13381-8:2013. Compliance; primers & colours: EAD 350402-0001106.
Packaging	20 litre / approx. 29 kg pails: 36 pcs per pallet



# Protecta® FR Coating

Fire rated coating

## General description

Protecta® FR Coating spray grade, is an ablative sealant coating designed to enhance, seal and fire protect mineral fibres. It is based on a durable polymer system with inert fillers, non-halogenated fire retardants and a preservative to resist microbial attack.

Protecta® FR Coating is designed to be applied via spraying directly onto mineral fibres. The coating dries to give a sound, flexible white surface finish. During installation of mineral fibres, the cured sealant coating reduces de-lamination and increases surface stability for adhesive and fixing sealant application.

## Main uses

The coating applied on mineral fibres is classified for all types of constructions with or without building service penetrations.

Suitable for most surfaces, including concrete, bricks, masonry, steel, wood, gypsum, glass, plastics and most non-porous surfaces.

## Features

- Easy to retrofit additional building services after installation
- Non-toxic & emission-free
- Permanently flexible - will accommodate movements during fire and smaller movements in the construction it has been fitted within
- Suitable for most surfaces, including concrete, bricks, masonry, steel, wood, gypsum, glass, plastics and most non-porous surfaces
- May be used in unlimited lengths in walls with heights up to 1200mm and in floors with widths up to 120mm
- May be installed in gypsum walls without framing around the opening
- Halogen-free with added fungicides
- Once fully cured, the coated board resists water and frost

## Ratings

### Sound Rating:

- Rw 55 dB - Protecta® FR Coating 1.0mm WFT on both sides of minimum 50mm thick stone wool with density minimum 160kg/m<sup>3</sup>

### Fire rating:

- Up to 180 minutes depending on application.

## Certificates



## Technical data

Form	Ready to use viscous paste
Cure system	Water loss
Colour	White
Non-sticky	Max. 75 minutes
Totally hardened	3 to 5 days depending on thickness and temperature
Flexibility	Low to medium, 12.5%
Specific Gravity	1.3 – 1.4
pH	8.5 - 9.2
Flash point	None
Solids Content	> 58 %
Temperature range	-30°C to +80°C (when hardened)
Application temp.	+10°C to +30°C
Shelf life	Up to 12 months when stored in unopened containers under cool dry conditions. AVOID FROST and extremes of temperature. Stored in temperatures between 5°C and 30°C
Durability	Up to 25 years when used as recommended
Packaging	8 litre pails, 200 litre drums



# Protecta® Service Coating FR-1

Fire rated coating for cables in service installations

## General description

Protecta® Service Coating FR-1 is a water-based intumescent coating for the fire protection of cables in a service installation.

The coating upgrades the insulation and integrity of the installation. The coating is non-toxic, emission-free, durable and can be applied in one coat, saving time and money.

## Main uses

Protecta® Service Coating FR-1 provides excellent fire resistance, making combustible cables fire-proof. It can be used in combination with Protecta® FR Board as a coatback on services to achieve a higher fire classification.

## Features

- Non-toxic and emission-free with near-zero VOC and best possible emission classifications
- Durable, robust and designed to last, can be cleaned with a damp cloth without the risk of washing off the paint
- No topcoat needed, excellent coverage by brush or spray and can be applied in one-coat saving paint and especially application time
- The durability of the coating is expected to be at least 12 years
- Halogen free with added preservatives that resist bacteria and fungal growth providing extra protection to health in addition to the non-harmful emissions

## Ratings

Fire rating:

- Up to 90 minutes depending on application.

## Certificates



## Technical data

Type	Acrylic based intumescent coating
Cure system	Water loss
Health and safety	Non-hazardous
Tests standards	International Electrotechnical Commission 60331 and EuroNorm 1366
Classification standard	s EN 13501-1 and Regulation (EU) 2016/364
Reaction to fire	B-s1,d0
Colour	White base, matt
Specific gravity	1.4g/cm <sup>3</sup>
Solids (theoretical)	70.1%
VOC	0.0001 g/L
Touch dry	1 hour at ~22°C & 50% RH *
Hard dry	1.5 hour at ~22°C & 50% RH *
Application conditions	Minimum +10°C and humidity lower than 80%
Temperature range	-30°C to +80°C (when hardened)
Durability	Without topcoat: Type Z2 internal conditions with humidity lower than 85% R.H, excluding temperatures below 0°C. With topcoat: According to the chosen product
Shelf life	Up to 6 months when stored in cool dry well ventilated areas between +20 and +25 °C
Work life	12 years
Packaging	3 litre pails, 200 litre drums, 1000 litre IBCs



# Protecta® Waterproofer

Water repellent for Protecta Mortar, brickwork, concrete, plaster & façades

## General description

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 1m<sup>2</sup> per 200g.

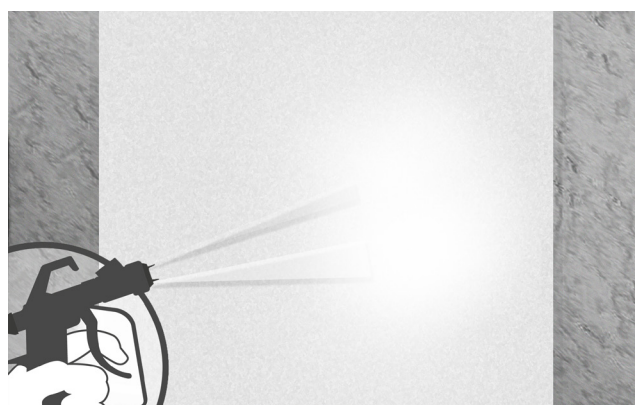
## Main uses

Protecta® Waterproofer is suited to be used with any kind of mineral substances that exhibit a minimum amount of absorption capacity such as Protecta® EX Mortar, brickwork concrete, plaster and façades.

## Features

- Simple, drip-free application with unproblematic overhead workability
- Water and VOC-free
- High concentration of active ingredients
- Alkaline stable
- Does not build up a film
- Extraordinary penetration depth, due to the long contact time with the material surface
- Can be applied without any loss, in one single step and without material running
- Causes no discoloration or intensification of the masonry surface colour when applied on suitable substrates

## Certificates



## Technical data

Composition	High viscosity cream based on silanes and siloxanes
VOC content	VOC-free
Appearance	Milky, white, pasteous
Concentration	approx. 40 %
Flashpoint	n.a.
Viscosity (at 20 °C)	n.a.
Density (at 20°C)	approx. 0,8 g/ccm
pH value	n.a.
Packaging	3L Plastic buckets
Storage stability	approx. 12 months at + 5 to + 25 °C



# Protecta® FR Putty Pads

Fire rated non-setting pads

## General description

Protecta® FR Putty Pads are an easy to apply fire and sound rated sealant supplied as a non-setting pad. The pad is hand workable, reusable and re-serviceable due to its non-setting properties.

Protecta® FR Putty Pads for tap water wall boxes will reinstate the fire rating of a dry lining partition wall for one and a half hours. It will also prevent the passage of smoke and flames in a fire and sound and air movement during service life, through the wall boxes into the cavity.

Protecta® Putty Pads for electrical sockets are shaped for use on both single and double electrical sockets installations in dry lining walls. The pads are supplied in a cross shape for internal installation in a socket and in a rectangular shape for application on the rear of the socket.

## Main uses

Protecta® FR Putty Pads are shaped for use on both single and double wall box installations in dry lining walls and tap water wall boxes.

## Features

- Gives wall boxes for tap water a high fire resistance in dry lining partitions
- Stops penetration of both cold and hot smoke
- Self-adhesive and very easy to apply without tools
- Can be used in wall boxes on both sides of the wall without the need for spacing between installations for safety
- Can be used in single and double wall boxes (cold and hot water)
- Unaffected by moisture; can be used in wet rooms
- Never hardens and ensures a tight fit
- Can be reshaped to other sizes if necessary
- Provides excellent sound insulation
- Environment and user friendly; contains no solvents or VOC's
- Contains a low pressure intumescent for optimal fire protection
- Working life of at least 50 years

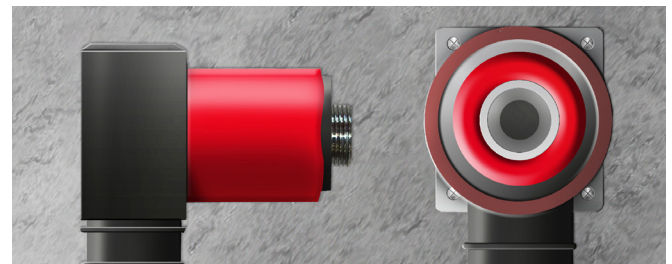
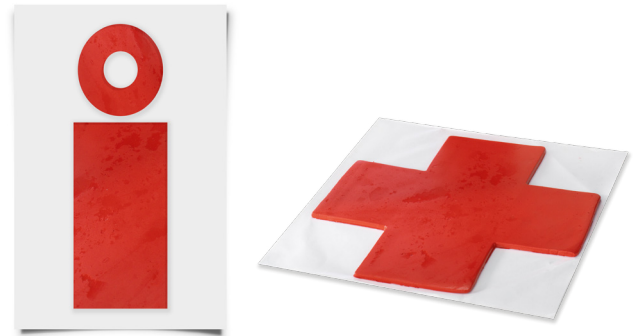
## Ratings

### Sound Rating:

- Rw 67 dB - Putty Pads for sockets.

### Fire rating:

- Up to 90 minutes depending on application.



## Technical data

Condition	Ready for use, silicone based putty
Durability/service	Class Z <sub>2</sub> : Intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV
Density	1.55 g/ml
Application temperature	+4 °C to +40 °C
Thickness	4 mm
Service temperature	-70 °C to +120 °C
Storage	Stored in temperatures between 5°C and 30°C
Working life	Under normal conditions; 50 years
Colour	Red
Form	Pads pre-shaped to its intended use
Packaging	For Tap water wall boxes: 4 kits per box For Electrical sockets: 20 units per box

## Certificates





# Protecta® FR Putty Cord

Fire rated non-setting cord

## General description

Protecta® FR Putty Cord is designed to be easily fitted around service penetrations where the gap around the services is very small. Also, it's perfect for where there are no gaps at all and it is impossible or difficult to use conventional fire rated sealant due to the required depth and backing material.

Protecta® FR Putty Cord is an easy to apply fire and sound rated sealant supplied as a non-setting putty. The pad is hand workable, re-serviceable and re-useable due to its non-setting properties. They are supplied in pre-shaped moldable pads which are push-fit self adhesive.

## Main uses

Protecta® FR Putty Cord can be retrofitted where sealants cannot be used around cable and pipe penetrations.

## Features

- Stops penetration of both cold and hot smoke
- Self-adhesive and very easy to apply without tools
- Unaffected by moisture; can be used in wet rooms
- Never hardens and ensures a tight fit
- Can be reshaped to other sizes if necessary
- Provides excellent sound insulation
- Environment and user friendly; contains no solvents or VOC's
- Contains a low pressure intumescent for optimal fire protection
- Working life of at least 50 years

## Ratings

Fire rating:

- Up to 90 minutes depending on application.

## Certificates



## Technical data

Condition	Ready for use, silicone based putty
Durability/service	Class Z <sub>2</sub> ; Intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV
Density	1.55 g/ml
Application temperature	+4 °C to +40 °C
Service temperature	-70 °C to +120 °C
Storage	Stored in temperatures between 5°C and 30°C
Working life	Under normal conditions; 50 years
Colour	Red
Form	Ø15 mm x 20 cm cord
Packaging	5 cords per box

# Application overview

Type of penetration	Size	Seals without penetrations	Cables	Steel pipes	Copper pipes	Alupex pipes	Ventilation ducts	Plastic Pipes	PEX pipe-in-pipe
FR PUTTY CORD	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR COLLAR	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR ACRYLIC	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR GRAPHITE	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR IPT	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR FOAM	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
EX MORTAR	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR BOARD	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR PIPE WRAP	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR SERVICE TRANSIT	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X
FR DAMPER	30mm	X	X	X	X	X	X	X	X
	50mm	X	X	X	X	X	X	X	X
	100mm	X	X	X	X	X	X	X	X
	300x300mm	X	X	X	X	X	X	X	X
	1200x2400mm	X	X	X	X	X	X	X	X
	1200x∞mm	X	X	X	X	X	X	X	X
	≤ 21 single	X	X	X	X	X	X	X	X
	≤ 21 bundled	X	X	X	X	X	X	X	X
	≤ 50 single	X	X	X	X	X	X	X	X
	≤ 50 bundled	X	X	X	X	X	X	X	X

√ = Yes X = No <sup>1)</sup> With Protecta® FR Pipe Wrap. <sup>2)</sup> With Protecta® FR Damper.



## Contact us

### **United Kingdom**

#### **Head Office and Factory**

Polyseam Ltd,  
15 St Andrews Road,  
Huddersfield, HD1 6SB. United Kingdom.  
Tel: +44 (0) 1484 421036  
E: post.uk@polyseam.com

### **Norway**

Polyseam AS,  
Ravneveien 7, Linnestad Næringsområde  
N-3174 Revetal, Norway.  
T: +47 3330 6690  
E: post.no@polyseam.com

### **Sweden**

Polyseam AB,  
Frukthandlarvägen 7  
120 44 Årsta, Sweden.  
T: +46 (0) 8 124 563 00  
E: post.se@polyseam.com