

Fire Stopping Compartmentation Systems

FLAMOPRO



TRIA

description

FLAMOPRO Sealant is an acrylic based graphite sealant used to reinstate the fire resistance performance of wall and floor constructions where they have been provided for the penetration of single or multiple services to form penetration seals where gaps are present.

FLAMOPRO Sealant expands upon contact with heat, and is considered as an intumescent or reactive material.

FLAMOPRO Sealant is supplied in liquid form constrained within 310ml cartridges. The sealant is gunned or trowelled into the annular space in or between the separating element/elements to a specific depth utilising various backing materials.

intended use

The intended use of FLAMOPRO Sealant is to reinstate the fire resistance performance of rigid and flexible wall and floor constructions where they are penetrated by various cables, plastic and insulated metallic pipes.

The specific elements of construction that the system FLAMOPRO Sealant may be used to provide a penetration seal in, are as follows:

- Rigid wall and floors, flexible wall and batts in wall and floor.
- Linear Joints up to 20mm wide.
- Large service openings up to 300mm x 100mm.
- Batt aperture up to 1100mm x 750mm.
- Metallic Pipes, Cables, Cable Bunches (inc Telecommunication), Cable Trays and Cable Ladders.

key product points

- Lubrizol Approved.
- Combustible Pipes up to 125mm dia - PVC, PE, PP, ABS and PEX / MLC .
- Sealing elastomeric foam and glass wool insulation.
- In irregular applications.
- Causes no known affects to plastic pipes, plastic cables, sheathing or metallic components.
- Easy clean up with water and is odourless.
- Over paintable.
- Smoke, gas, water tight and air tight.
- High Expansion Ratio.
- Resists fungi and vermin.



PRODUCT TECHNICAL DATA

Description	Result	Test Standards
Density	Ca. 1.23 - 1.33g/cm ³	ISO 2811-1:2011
Shore Hardness A	68	ISO 7619-1:2010
Colour	Black	
Application Temperature	+5 °C to 35 °C	
Expansion Onset Temperature	Ca. 180 °C	
Expansion	Up to 20 times	
Expansion Pressure	7 bar	
Skin Time	15 minutes @ 25 °C/ 50%RH	
Cure Time	1.7mm per 24hrs	
Shelf Life	18 months unopened	
pH	6 - 9	EN 1366-4:2006 + A1:2010
Fire Resistance	EI 120	EN1366-3 and EN1366-4
Air Permeability	600Pa - 100Pa 11.1/16.7 m ³ /h/m ²	EN1026
Classification	EN 13501-2, ISO 11600	
Acoustics	Rw (C;Ctr) : 52 (-1;-6) dB	EN ISO 10140-2:2010
Durability Services	Type Z, intended for use in internal conditions	
BREEAM International	Compliant	GN22: BREEAM Recognised Schemes for VOC Emissions from Building Products
Expected Shelf Life	At least 12 months	Stored in accordance with packaging instructions

backing material

Mineral wool (min. 80kg/m³) or PE backing rod where required can be used as backing material for FLAMOPRO Sealant. Backing material is not needed within all installations, though the FLAMOPRO Sealant should be installed correctly to achieve the performance needed.

key installation points

Ensure that the aperture and services in question are tested with FLAMOPRO Sealant, and the site conditions are within the application specification. An annular space needs to be present around the service to allow sufficient installation depth.

All services and apertures need to be clean and clear of all dust and loose particles. The aperture temperature needs to be at 5°C or above at time of installation.

Upon installation make sure that you install the FLAMOPRO Sealant 20mm annular and 25mm deep around all services effectively, ensure that you fill all of the annulus and compact the FLAMOPRO Sealant into the annular gap.

Once compacted, smooth off the FLAMOPRO Sealant to produce a professional finish.

substrates

All walls shall have at least the same fire resistance as that required for the sealing system.

service support requirements

Services should be rigidly supported via steel angles, hangers or channels, not further than 400mm from the surface of the sealing system on both faces of the wall and top side of the floor unless specified otherwise in the performance data.

flexible and rigid wall - plastic pipes

FLEXIBLE AND RIGID WALL CONSTRUCTION			
Penetration Specification	FLAMOPRO (installed both faces)	Backing Material	Classification
PVC Pipe 40mm ø	20mm annulus x 25mm deep.	N/A	EI120
PVC Pipe 125mm ø	20mm annulus x 25mm deep.	N/A	EI60
ABS Pipe 40mm ø	20mm annulus x 25mm deep.	N/A	EI120
HDPP Pipe 40mm ø	20mm annulus x 25mm deep.	N/A	EI120

flexible and rigid wall - metallic pipes

FLEXIBLE AND RIGID WALL CONSTRUCTION PENETRATION SEAL WITH FLAMOPRO SEALANT			
Penetration Specification Mild Steel or Copper and Cast Iron	Backing Material	FLAMOPRO (installed both faces)	Classification
40mm ø	20mm thick foil faced mineral wool insulation (min 80kg/m ³).	15mm deep x 15mm wide annulus FLAMOPRO Sealant to both faces of the seal.	EI60
40 - 159mm ø	30mm thick foil faced mineral wool insulation (min 80kg/m ³).		E60 EI45

FLEXIBLE AND RIGID WALL CONSTRUCTION PENETRATION SEAL WITH FLAMOPRO SEALANT			
Penetration Specification Mild Steel	Backing Material	FLAMOPRO (installed both faces)	Classification
40mm ø	20mm thick foil faced mineral wool insulation (min 80kg/m ³).	15mm deep x 15mm wide annulus FLAMOPRO Sealant to both faces of the seal.	EI60
40 - 150mm ø	30mm thick foil faced mineral wool insulation (min 80kg/m ³).		

flexible and rigid wall - plastic pipes and cables

FLEXIBLE AND RIGID WALL - PLASTIC PIPES AND CABLES			
Penetration Specification	FLAMOPRO (installed both faces)	Backing Material	Classification
PVC Pipe 40mm	10mm annulus x 25mm deep.	N/A	EI120
PVC Pipe 125mm	16mm annulus x 25mm deep.	30mm deep Mineral wool 80kg/m ³ .	EI120
HDPE Pipe 63mm ø , cables up to 21mm ø.	300mm wide x 100mm high x 25mm deep.	N/A	EI120
HDPE Pipe 90mm ø	12.5mm annulus x 25mm deep.	N/A	EI120
ABS Pipe 90mm ø	12.5mm annulus x 25mm deep.	N/A	EI120
Cables up to 21mm ø.	300mm wide x 100mm high x 25mm deep.	N/A	EI120

FLEXIBLE AND RIGID WALL - INSULATED METALLIC PIPES

Penetration Specification	FLAMOPRO (installed both faces)	Backing Material	Classification
Copper / Steel Pipe / Cast Iron 60mm Ø, insulated with 32mm "Armaflex AF" type (CS) Continued Sustained.	20mm annulus x 25mm deep	N/A	E120 EI90
Copper / Steel Pipe / Cast Iron 15mm Ø 0.8mm insulated with 13mm "Armaflex AF" type (CS) Continued Sustained.	15mm annulus x 25mm deep	N/A	EI120

FLAMOPRO LINEAR JOINT SEALS

Substrate	Depth (mm)	Backing Material	Classification
Flexible Wall to Rigid Wall.	25mm. (Both Sides)	PE backing Rod	EI120 - V - X - F - W 00 to 20

RIGID WALLS

Aperture Size	Seal Composition	Services	Classification
180mm x 180mm	The apertures were sealed using a 25mm depth of FLAMOPRO sealant. The sealant was applied flush to both sides of the wall with a backing of 20mm thick Mineral wool insulation with a measured density of 45kg/m ³ .	Electrical cables up to 21mm dia	E 180, EI 45
		Electrical cables 33mm to 80mm dia	E 180, EI 45
		100mm diameter bundle telecommunication cable type "F"	EI 240
		Steel or Copper Conduits up to 16mm	E 240, EI 45
		Plastic conduits up to 16mm	E 240, EI 90

flamoseal panel

FLEXIBLE AND RIGID WALL - INSULATED METALLIC PIPES

Penetration Specification	FLAMOPRO (installed both faces)	Backing Material	Classification
Steel Pipe / Cast Iron 40mm Ø insulated with 20mm Mineral wool Foil Faced 80kg/m ³ (CS) Continued / Sustained.	15mm annulus x 15mm deep	N/A	E 90, EI 60
Copper / Steel Pipe / Cast Iron 40mm - 159mm Ø insulated with 30mm Mineral wool Foil Faced 80kg/m ³ (CS) Continued / Sustained.	15mm annulus x 15mm deep	N/A	EI 60

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL

Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
PVC Pipe 50mm - 125mm Ø	20mm annulus 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm Flamoseal Panel max 1100mm high x 750mm wide	EI120

flamoseal panel - cables and cable trays

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
*500mm perforated cable tray	20mm annulus 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm max 1100mm high x 750mm wide	EI120

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
*500mm perforated cable tray	20mm annulus, 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm max 1100mm high x 750mm wide	EI120
*Electrical cable up to 21mm Ø			

*All cables coated with DFT 2mm Flamoseal Coating 300mm along the cables both sides of the seal.

flamoseal panel

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
PEX / MLC (Multilayer Composite) Pipe 40mm Ø	20mm annulus, 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm Flamoseal Panel max 1100mm high x 750mm wide.	EI120
PEX / MLC (Multilayer Composite) Pipe 50mm Ø			
PEX / MLC (Multilayer Composite) Pipe 63mm Ø			
PEX / MLC (Multilayer Composite) Pipe 75mm Ø			
PEX / MLC (Multilayer Composite) Pipe 90mm Ø			
PEX / MLC (Multilayer Composite) Pipe 110mm Ø			

flamoseal panel - plastic pipes

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
PVC Pipe 50mm - 125mm Ø	20mm annulus 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm Flamoseal Panel max 1100mm high x 750mm wide.	EI120

flamoseal panel - cables and cable trays

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
*500mm perforated cable tray.	20mm annulus, 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm Flamoseal Panel max 1100mm high x 750mm wide.	EI120
*Electrical cables up to 21mm Ø.			

*All cables coated with DFT 2mm Flamoseal Coating 300mm along the cables upper sides of the seal.

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO	Flamoseal Panel	Classification
PEX / MLC (Multilayer Composite) Pipe 40mm Ø	20mm annulus, 25mm deep both faces of the Flamoseal Panel	Double layer of 50mm Flamoseal Panel max 1100mm high x 750mm wide.	EI120
PEX / MLC (Multilayer Composite) Pipe 50mm Ø			E 120 EI60
PEX / MLC (Multilayer Composite) Pipe 63mm Ø			
PEX / MLC (Multilayer Composite) Pipe 75mm Ø			
PEX / MLC (Multilayer Composite) Pipe 90mm Ø			
PEX / MLC (Multilayer Composite) Pipe 110mm Ø			

flamoseal panel - metallic pipes with insulation

FLAMOPRO PENETRATION SEALS. DOUBLE LAYER OF 50MM THICK FLAMOSEAL PANEL ON A RIGID WALL			
Penetration Specification	FLAMOPRO (installed both faces)	Backing Material	Classification
Copper / Steel Pipe and Cast Iron 40mm Ø insulated with 32mm 'Armaflex AF' (LS 650mm) Local Sustained 650mm.	20mm annulus x 25mm deep	N/A	EI120 EI30
Copper / Steel Pipe and Cast Iron 40mm - 159mm Ø insulated with 32mm 'Armaflex AF' (LS 650mm) Local Sustained 650mm.	20mm annulus x 25mm deep	N/A	E 120 EI30
Copper / Steel and Cast Iron Pipe 40mm diameter	15mm deep x 15mm wide annulus FLAMOPRO Sealant to both faces of the seal	20mm thick foil faced mineral wool insulation (min 80kg/m ³).	E90 EI60
Copper / Steel and Cast Iron Pipe 40 - 159mm diameter		30mm thick foil faced mineral wool insulation (min 80kg/m ³).	EI60
Steel Pipe / Cast Iron 40mm diameter	15mm deep x 15mm wide annulus FLAMOPRO Sealant to both faces of the seal	20mm thick foil faced mineral wool insulation (min 80kg/m ³).	E90 EI60
Steel Pipe / Cast Iron 40 - 150mm diameter		30mm thick foil faced mineral wool insulation (min 80kg/m ³).	EI60

rigid floor - insulated metallic pipes

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
Copper/Steel Pipe and Cast iron 41mm, insulated with 16mm - 32mm 'Armaflex'	25mm deep	20mm annulus	100mm deep stone wool 45kg/m ³	EI20

rigid floor - plastic pipes

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
PP Pipe 110mm Ø	25mm deep	20mm annulus	100mm deep stone wool 45kg/m ³	EI30
PP Pipe 110mm Ø				EI120
PP Pipe 50mm Ø				EI240

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
PE Pipe 40mm Ø	25mm deep	20mm annulus	100mm deep stone wool 45kg/m ³	EI30
PE Pipe 125mm Ø				EI120
PE Pipe 125mm Ø				EI240

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
PVC Pipe 40mm Ø	25mm deep	20mm annulus	100mm deep stone wool 45kg/m ³	EI240
PVC Pipe 114mm Ø				E90 EI45
PVC Pipe 114mm Ø				EI120

rigid floor - plastic pipes, conduits and cables

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
Three PE pipes; 40mm Ø x 60mm Ø and 125mm Ø all fitted centrally in the aperture. 60mm Ø pipe filled with electrical cables; three A1, three A2 and three A3 cables and one B cable.	25mm deep	250mm x 250mm	100mm deep stone wool 45kg/m ³	EI20 EI90

rigid floor - metallic pipes with insulation

RIGID FLOOR				
Penetration Specification	FLAMOPRO (installed both faces)	Aperture Size (mm)	Backing Material	Classification
Copper / Steel Pipe and Cast Iron 41mm Ø insulated with 16mm 'Armaflex'	25mm deep	20mm annulus	100mm deep stone wool 45kg/m ³	E240 EI60

information

TRIA has Technical Representatives who provide assistance in the selection and specification of TRIA products. For more information, specification and technical advice please call our Head Office geral@tria.pt. Guarantee / Warranty: TRIA products are manufactured to rigid standards of quality. Any product which has been applied in accordance with TRIA's written instructions and in any application

recommended by TRIA, but which is proved to be defective in product quality, will be replaced free of charge. No liability can be accepted for the information provided in this document although it is published in good faith and believed to be correct. TRIA reserves the right to alter product specifications without prior notice, in line with our Company policy of continuous development and improvement.

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