Technical Data Sheet

Stopseal 50mm & 60mm Batt

UIC of product-type: SSBT

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FSi DEVELOP MANUFACTURE PROTECT

FIRE STOPPING & COMPARTMENTATION SYSTEMS

UAE Certificate of Compliance

APPROVED
CF513

ETA 14-0005
CE-1121-CPR-JA5021

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UKAS PRODUCT CERTIFICATION 087

BM TRADA

UKAS MANAGEMENT SYSTEMS 012

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Product Overview

Technical Description of the Product

Stopseal 50mm and 60mm Batt is a coated mineral wool board used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of single or multiple services. Stopseal 50mm and 60mm Batt is supplied coated in both single and double coated versions.

The board is cut and friction fitted into the aperture while using Pyrocoustic Sealant.

Stopseal 50mm Batt are 50mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 140kg/m^3. Stopseal 60mm Single Sided Batt are 60mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 160kg/m^3. Pyrocoustic Sealant is required to seal all joints and junctions during the sealing process. Pyrocoustic Sealant is subject to a separate TDS. Pyropro HPE Sealant is required to seal around specific services. Pyropro HPE Sealant is subject to a separate TDS.

Reaction to fire

System Stopseal 50mm and 60mm Batt is classified 'E' in accordance with EN 13501-1.

Intended use

The intended use of Stopseal 50mm and 60mm Batt is to reinstate the fire resistance performance of rigid and flexible wall constructions where they are penetrated by various cables, metallic pipes and blank seals.

The specific elements of construction that the system Stopseal 50mm and 60mm Batt may be used to provide a penetration seal in, are as follows:

- Fire Resistant testing to EN 1366-3 EI 60, EI 90, EI 120 and BS 476 - 240mins.
- Fire Classification to EN 13501-2.
- Certifire 3rd Party Accreditation CF513.
- IET (IEE) 17th Edition Fire Stop Compliant to Regulation 527.1-3 - Electrical Installations.
- BS 7671-2008 Chapter 42 & 52 - Electrical Installations Fire Resistance.
- Fire resistance tested in flexible walls, rigid walls & floors, composite panel, CLT wall and Durasteel wall.

Key Product Points

- Air Permeability.
- Acoustic Isolation.
- Suitable for indoor use without additional environmental protection.
- Remains flexible.
- Life expectancy of over 25 years.
- Suitable for large openings in walls and floors with additional supports.

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Description	Result	Test Standards
Dimensions	1200mm x 600mm x 50mm / 1200 x 600 x 60mm	
Stone Fibre Density	> 140Kg/m³	
Coating Thickness	1mm Nominal, 2.2kg wet film coating	
Fire Resistance	4 hours	EN 1366-3; EN 1363-1 EN 13501-2, BS 476 pt 20/22
Reaction to fire	Class E	EN 13501-1
Insulation (Single Batt)	142 minutes on seal face, EI 60	EN 13501-2
Insulation (Double Batts)	264 minutes on seal face, EI 120	EN 13501-2
Acoustic Performance	Acoustic Reduction up to 60dB **(Refer to FSi Technical Department for requirements)**	EN 10140
Air Permeability	600Pa EN 1026 - 100Pa 1.8/1.4 m3/h/m2	EN 1026
Thermal Conductivity (U Value)	0.034 W/mK at 10°C	
Pyrocoustic Sealant coverage	2.15kg Spread, 2.20kg Spray	
Maximum Size of Seal	Rigid Wall 5.76m², Floor 2.88m²*	
Maximum Size – Unsupported Wall	2880 x 1440mm (4.03m² with services) 1200 x 1200mm (1.44m² with no services)	
Maximum Size - Unsupported Floor	1600 x 700mm (1.12m²)	
Mechanical support*	30mm x 30mm x 1.6mm steel angle	
VOC % Nonaqueous volatiles (105°C)	0.8	LEED
Expected Shelf Life	N/A	Must be stored in dry conditions off the floor

Installation Friction Fit

Ensure that the aperture and services in question are tested with Stopseal Batt, and the site conditions are within the application specification.

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

Upon installation make sure that you install the Stopseal Batt with at least 10% friction fit. Coat **all joints** and interfaces of the Stopseal Batt using Pyrocoustic Sealant.

Once compacted within the aperture finish off the edges with a bead of Pyrocoustic Sealant to create a seal.

Installation Pattress Fit

Ensure that the aperture and services in question are tested with Stopseal Batt, and the site conditions are within the application specification.

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

Upon installation make sure that you install the Stopseal Batt with 100mm overlap and fix the Batt to the substrate with the minimum 80mm steel wood screws and penny washers and maximum 300mm centres overcoated with 2mm Pyrocoustic Sealant or Stopseal Coating. Coat **all joints** using Pyrocoustic Sealant and ensure all leading edges of the Stopseal Batt are coated with Pyrocoustic Sealant or Stopseal Coating.

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Substrates

The walls shall be a minimum of **100mm thick**. Drywalls shall comprise a minimum of 2 layers of 'Type F' Gypsum board on both faces, with minimum 50mm studs. Masonary / Concrete walls shall have a minimum density for concrete or brick of 780kg/m³ and for aerated concrete blocks of 600kg/m³. 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 unless specified otherwise in the performance data.

Terminology

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501-2:2007 + A1:2009, ETAG-026, Air Permeability EN1026, Sound EN10140. Fire resistance classes are: E = Integrity, the product can withstand the fire from the non-fire side, I =Insulation, the product can withstand the temperature travelling down the service, U/U = Uncapped inside and outside the furnace, U/C = Uncapped inside and Capped outside the furnace, C/U = Capped inside and Uncapped outside the furnace.

FLEXIBLE AND RIGID WALLS

Double Stopseal 50mm Batt in Flexible or Rigid Walls with a minimum thickness of 100 mm.					
Aperture size (mm)	**Seal composition**	**Service(s)**	**Seal**	**Position of service(s)**	**Classification**
730mm wide by 1200mm high	Double layer of 50 mm thick 140 kg/m³ Stopseal Batt.	Single copper or mild steel pipe 40mm diameter and 1.5 – 14.2 mm wall thickness with sustained/continuous 20mm thick foil faced glass wool insulation (min 80Kg/m³).	15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe.	50mm edge min.	E 90 U/C EI 60 U/C
		Single copper or mild steel pipe 40-159mm diameter and 2.3 – 14.2 mm wall thickness with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m³).			EI 60 U/C

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FLEXIBLE AND RIGID WALLS

Double Stopseal 50mm Batt in Flexible or Rigid Walls with a minimum thickness of 100 mm.					
Aperture size (mm)	**Seal composition**	**Service(s)**	**Seal**	**Position of service(s)**	**Classification**
730mm wide by 1200mm high	Double layer of 50 mm thick 140 kg/ m^3 Stopseal Batt.	Single mild steel pipe 40mm diameter and 1.7 – 14.2 mm wall thickness with sustained/ continuous 20mm thick foil faced glass wool insulation (min 80Kg/m^3).	15mm deep x 15mm wide annulus Pyropro HPE Sealant to both faces of the pipe.	50mm edge min.	E 90 U/C EI 60 U/C
		Single copper or mild steel pipe 40-150mm diameter and 2.3 – 14.2 mm wall thickness with sustained/continuous 30mm thick foil faced glass wool insulation (min 80Kg/m^3).			EI 60 U/C

Double Stopseal 50mm Batt in Flexible or Rigid Walls with a minimum thickness of 100 mm.				
Aperture size (mm)	**Seal composition**	**Service(s)**	**Position of service(s)**	**Classification**
730mm wide by 1200mm high	Double layer of 50 mm thick 140 kg/m^3 Stopseal Batt.	Electrical cables up to 21mm dia.	50mm edge min.	EI 60
		Electrical cables 22mm to 80mm dia.		E 60 EI 45
		Cable Trays and Ladders.		EI 60
		100 mm diameter bundle telecommunication cable type “F”.		EI 60
		Unsheathed electrical cables up to 17mm dia.		E 60 EI 30
		Unsheathed electrical cables 18-24mm dia.		E 60 EI 15
		Steel or Copper Conduits up to 16mm.		E 60 EI 15
		Plastic conduits up to 16mm.		EI 60

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FLEXIBLE AND RIGID WALLS

Double Stopseal 50mm Batt in Rigid & Flexible Walls with a minimum thickness of 100mm.				
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Classification**
750mm wide by 1200mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Elastomeric insulation 13 - 25mm thick.	2 Layers of 2mm thick 40mm wide PipeBloc EL installed within both batts.	EI 60
		Single copper or steel pipe 42mm diameter and 1mm wall thickness with sustained/continuous Elastomeric insulation 13 - 25mm thick.		E120, EI 90

Double Stopseal 50mm Batt in Rigid & Flexible Walls with a minimum thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
750mm wide by 1200mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	Single copper or steel pipe 40 - 108mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Phenolic Foam insulation 25 - 40mm thick.	C/U	2 Layers of 2mm thick 40mm wide PipeBloc EL installed within both batts.	E120, EI 60
		Single copper or steel pipe 42mm diameter and 1mm wall thickness with sustained/continuous Phenolic Foam insulation 25 - 40mm thick.			E120, EI 90

Double Stopseal 50mm Batt in Rigid & Flexible Walls with a minimum thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
600mm wide by 600mm high	Double Batt installation of 50mm thick 140kg/m³ Stopseal Batt internally fit into aperture.	Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Glass wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .	C/U	Cluster Formation of Pipes with 0mm separation.	E 120, EI 45
		Single copper or steel pipe 40mm diameter and 1mm wall thickness with sustained/continuous Glass wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .			E 120, EI 60
		Single copper or steel pipe 40mm diameter and 1mm wall thickness with sustained/continuous Stone wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .			E 120, EI 60
		Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Stone wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .			E 120, EI 45

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FLEXIBLE AND RIGID WALLS

Double Stopseal 50mm Batt in Rigid & Flexible Walls with a minimum thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
750mm wide by 1200mm high	Double Batt installation of 50mm thick 140kg/m³ Stopseal Batt internally fit into aperture.	Single steel pipe 324mm diameter and 16mm wall thickness with Local/Interrupted Stone Wool insulation ≥ 40mm thick with a density ≥ 40kg/m³ .	C/U	Cluster Formation of Pipes with 0mm separation.	EI 45
		Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/continuous Local/ Interrupted Stone Wool insulation ≥ 40mm thick with a density ≥ 40kg/m³ .			EI 45
		Single steel pipe 324mm diameter and 16mm wall thickness with Local/Interrupted PST Coating applied at a 2mm WFT.			E 120, EI 45
		Single copper or steel pipe 40 diameter and 1mm wall thickness with sustained/continuous Local/Interrupted PST Coating applied at a 2mm WFT.			E 120 , EI 45
		Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/continuous Local/ Interrupted PST Coating applied at a 2mm WFT.			E 120 , EI15

PipeBloc PCP, Face Fixed onto double Stopseal 50mm Batt in Flexible Wall with a minimum thickness of 100mm PE, ABS & SAN+PVC Pipes.								
Aperture Size	**Seal Composition**	**Services**	**Collar Reference**	**Intumescent Material**	**Capping**	**Seal**	**Collar Fixing**	**Classification**
750mm wide by 1200mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	PE Pipe 32mm Ø 2.9mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PE Pipe 40mm Ø 2.9mm Wall thickness	40mm PipeBloc PCP					
		PE Pipe 50mm Ø 2.9mm Wall thickness	50mm PipeBloc PCP					
		PE Pipe 55mm Ø 2.9mm - 4.4mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PE Pipe 63mm Ø 2.9mm - 4.4mm Wall thickness	63mm PipeBloc PCP					
		PE Pipe 75mm Ø 2.8mm - 6.7mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PE Pipe 82mm Ø 2.8mm - 6.7mm Wall thickness	82mm PipeBloc PCP					
		PE Pipe 90mm Ø 2.7mm - 10.0mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PE Pipe 100mm Ø 2.7mm - 10.0mm Wall thickness	100mm PipeBloc PCP					
		PE Pipe 110mm Ø 2.7mm - 10.0mm Wall thickness	110mm PipeBloc PCP					
		PE Pipe 125mm Ø 3.1mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PE Pipe 140mm Ø 3.9mm - 5.8mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PE Pipe 160mm Ø 4.9mm - 9.5mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

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FLEXIBLE AND RIGID WALLS

PipeBloc PCP, Face Fixed onto double Stopseal 50mm Batt in Flexible Wall with a minimum thickness of 100mm PP Pipes.								
Aperture Size	**Seal Composition**	**Services**	**Collar Reference**	**Intumescent Material**	**Capping**	**Seal**	**Collar Fixing**	**Classification**
750mm wide by 1200mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	PP Pipe 32mm Ø 2.9mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PP Pipe 40mm Ø 2.9mm Wall thickness	40mm PipeBloc PCP					
		PP Pipe 50mm Ø 2.9mm Wall thickness	50mm PipeBloc PCP					
		PP Pipe 55mm Ø 2.9mm - 4.4mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PP Pipe 63mm Ø 2.9mm - 4.4mm Wall thickness	63mm PipeBloc PCP					
		PP Pipe 75mm Ø 2.8mm - 6.7mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PP Pipe 82mm Ø 2.8mm - 6.7mm Wall thickness	82mm PipeBloc PCP					
		PP Pipe 90mm Ø 2.7mm - 10.0mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PP Pipe 100mm Ø 2.7mm - 10.0mm Wall thickness	100mm PipeBloc PCP					
		PP Pipe 110mm Ø 2.7mm - 10.0mm Wall thickness	110mm PipeBloc PCP					
		PP Pipe 125mm Ø 3.1mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PP Pipe 140mm Ø 3.5mm - 8.0mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PP Pipe 160mm Ø 4.0mm - 14.6mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

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FLEXIBLE AND RIGID WALLS

PipeBloc PCP, Face Fixed onto double Stopseal 50mm Batt in Flexible Wall with a minimum thickness of 100mm PVC-U & PVC-C Pipes.								
Aperture Size	**Seal Composition**	**Services**	**Collar Reference**	**Intumescent Material**	**Capping**	**Seal**	**Collar Fixing**	**Classification**
750mm wide by 1200mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	PVC Pipe 32mm Ø 1.8mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PVC Pipe 40mm Ø 1.8mm Wall thickness	40mm PipeBloc PCP					
		PVC Pipe 50mm Ø 1.8mm Wall thickness	50mm PipeBloc PCP					
		PVC Pipe 55mm Ø 2.3mm - 3mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PVC Pipe 63mm Ø 2.3mm - 3mm Wall thickness	63mm PipeBloc PCP					
		PVC Pipe 75mm Ø 3.1mm - 4.8mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PVC Pipe 82mm Ø 3.1mm - 4.8mm Wall thickness	82mm PipeBloc PCP					
		PVC Pipe 90mm Ø 4.2mm - 7.4mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PVC Pipe 100mm Ø 4.2mm - 7.4mm Wall thickness	100mm PipeBloc PCP					
		PVC Pipe 110mm Ø 4.2mm - 7.4mm Wall thickness	110mm PipeBloc PCP					
		PVC Pipe 125mm Ø 6mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PVC Pipe 140mm Ø 6.1mm - 7.5mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PVC Pipe 160mm Ø 6.2mm - 9.5mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

Flexible Wall with a minimum thickness of 100mm.				
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Classification**
1200mm x 1200mm	The aperture was sealed with two layers of 50mm thick and a nominal density of 140kg/m³ Stopseal Batt, coated on the outer faces only, forming a 200mm wide 'frame' within the aperture. The batts were coated on both faces with the spray coating referenced Stopseal Ablative Coating. The batts were friction fitted into the aperture and were sealed around their perimeter edges and along the butt joints with Pyrocoustic Sealant. The 800mm x 800mm aperture within the Stopseal Batt was sealed with nominal density 60kg/m³ stone wool to a depth of 100mm. This was then coated on each outer face with Flexi-Coat coating brush applied to the face of the batts. The Flexi-Coat coating is applied to a nominal dry film thickness of 0.7mm.	Electrical cables up to 21mm dia.	N/A	EI 60
		Electrical cables 33mm to 80mm dia.		
		Cable Trays and Ladders.		
		100mm diameter bundle telecommunication cable type "F".		
		Unsheathed electrical cables up to 17mm dia.		
		Unsheathed electrical cables 18-24mm dia.		
		Steel or Copper Conduits up to 16mm.		E 60 , EI 15
		Plastic conduits up to 16mm.		EI 60

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RIGID WALLS

Double Stopseal 60mm Batt in Rigid Walls with a minimum thickness of 150 mm.				
Aperture size (mm)	**Seal composition**	**Service(s)**	**Position of service(s)**	**Classification**
730mm wide by 1200mm high	Double layer of 60 mm thick 160 kg/m³ Stopseal Batt. Cables and cable trays wrapped with FSi P40/40 Stone Wool Insulation 40mm thick, 40Kg/m³, 200mm long interrupted at the seal.	Electrical cables up to 21mm dia.	50mm edge min.	EI 120
		Electrical cables 22mm – 80mm dia.		E120 EI90
		Cable Trays and Ladders.		EI 120
		100 mm diameter bundle telecommunication cable type “F”.		EI 120
		Unsheathed electrical cables up to 24mm dia.		EI 120

Single Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150 mm.				
Aperture size (mm)	**Seal composition**	**Service(s)**	**Position of service(s)**	**Classification**
600mm wide by 600mm high	Single layer of 50 mm thick 140 kg/m³ Stopseal Batt. Cables and cable trays wrapped with a single layer of 6mm thick FSi Thermal Defense Wrap 300mm long interrupted at the seal.	Electrical cables up to 80mm dia.	50mm edge min.	EI 60
		Cable Trays and Ladders.		EI 60
		100 mm diameter bundle telecommunication cable type “F”.		EI 60
		Unsheathed electrical cables up to 24mm dia.		EI 60
	Single layer of 50 mm thick 140 kg/m³ Stopseal Batt.	Steel or Copper Pipe 108mm dia, 1.5mm – 14.2mm Wall Thickness continuous/ interrupted 40mm stone wool insulation (min 140Kg/m³).		E60 C/U EI45 C/U

Single Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Single layer of 50mm thick 140kg/m³ Stopseal Batt.	*500mm perforated cable tray.	20mm gap above penetration full 50mm depth of the Stopseal Batt filled with PyroPro HPE.	50mm edge min.	EI30
		*Electrical cables up to 21mmØ.			EI45
		* 'C1' Cable.			
		* 'C2' Cable.			
		* 'C3' Cable.			
* All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.					

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RIGID WALLS

Single Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Single layer of 50mm thick 140kg/m³ Stopseal Batt.	Uponor MLC (Multi-Layer Composite) Pipe 40mm Ø 4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Batt filled with PyroPro HPE.	50mm edge min.	E45 U/C EI30 U/C
		Uponor MLC (Multi-Layer Composite) Pipe 50mm Ø 4.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 63mm Ø 6mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 75mm Ø 7.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 90mm Ø 8.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 110mm Ø 10mm wall thickness.			

Single Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Single layer of 50mm thick 140kg/m³ Stopseal Batt.	PVC Pipe 50mm Ø 2.4 - 7.4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Batt filled with PyroPro HPE.	50mm edge min.	EI45 U/C

Single Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.				
Aperture Size	**Seal Composition**	**Services**	**Position of Services**	**Classification**
1100mm x 750mm	Single layer of 50mm thick 140kg/m³ Stopseal Batt.	Copper/Steel Pipe 42mm Ø 1.2mm wall thickness.	50mm edge min.	EI45 C/U
		Copper/Steel Pipe 42mm - 159mm Ø upto 14.2mm wall thickness.	50mm edge min.	EI15 C/U E45 C/U

Double Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150 mm.				
Aperture size (mm)	**Seal composition**	**Service(s)**	**Position of service(s)**	**Classification**
730mm wide by 1200mm high	Double layer of 50 mm thick 140 kg/m³ Stopseal Batt. Cables and cable trays wrapped with FSi P40/40 Stone Wool Insulation 40mm thick, 40Kg/m³, 200mm long interrupted at the seal.	Electrical cables up to 21mm dia.	50mm edge min.	EI 120
		Electrical cables 22mm – 80mm dia.		E120 EI90
		Cable Trays and Ladders.		EI 120
		100 mm diameter bundle telecommunication cable type “F”.		EI 120
		Unsheathed electrical cables up to 24mm dia.		EI 120

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RIGID WALLS

Double Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	*500mm perforated cable tray.	20mm gap above penetration full 50mm depth of the Stopseal Coated Batt filled with PyroPro HPE.	50mm edge min.	EI120
		*Electrical cables up to 21mmØ.			EI120
		* 'C1' Cable.			EI120
		* 'C2' Cable.			E120 EI90
		* 'C3' Cable.			EI120
* All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.					

Double Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt .	Uponor MLC (Multi-Layer Composite) Pipe 40mm Ø 4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Coated Batt filled with PyroPro HPE.	50mm edge min.	EI120
		Uponor MLC (Multi-Layer Composite) Pipe 50mm Ø 4.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 63mm Ø 6mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 75mm Ø 7.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 90mm Ø 8.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 110mm Ø 10mm wall thickness.			

Double Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	PVC Pipe 50mm Ø 2.4 - 7.4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Coated Batt filled with PyroPro HPE.	50mm edge min.	EI120

Double Stopseal 50mm Batt in Rigid Walls with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**		**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	Copper/Steel Pipe 42mm Ø 1.2mm wall thickness.		50mm edge min.	E120 C/U EI60 C/U
1100mm x 750mm		Copper/Steel Pipe 42mm - 159mm Ø upto 14.2mm wall thickness.		50mm edge min.	E120 C/U EI30 C/U

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Substrates

The walls shall be a minimum of **100mm thick**. Drywalls shall comprise a minimum of 2 layers of 'Type F' Gypsum board on both faces, with minimum 50mm studs. Masonry / Concrete walls shall have a minimum density for concrete or brick of 780kg/m³ and for aerated concrete blocks of 600kg/m³. 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 unless specified otherwise in the performance data.

Terminology

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501-2:2007 + A1:2009, ETAG-026, Air Permeability EN1026, Sound EN10140. Fire resistance classes are: E = Integrity, the product can withstand the fire from the non-fire side, I =Insulation, the product can withstand the temperature travelling down the service, U/U = Uncapped inside and outside the furnace, U/C = Uncapped inside and Capped outside the furnace, C/U = Capped inside and Uncapped outside the furnace.

FLEXIBLE AND RIGID WALLS

Rigid & flexible walls with a minimum thickness of 75mm			
Aperture Size (mm)	**Seal Composition**	**Services**	**Classification**
570 x 200	Pattress installati on of 50mm thick Stopseal Batt . 50mm overlap of batt onto substrate with fixings at 300mm centers. Pyrocousti c Sealant was applied to substrate and all cut edges of batt .	Cable basket ≤ 500	EI 90
		21mm Cable (95mm²)	
		Cat5 telecoom cable bunle (x20)	
		Electrical cables up to 21mm ø	
200 x 200		20mm diameter Adaptaflex SPL20 flexible conduit	
		20mm diameter Kopex KSU 316 stainless steel flexible conduit	
250 x 250		Cable tray ≤ 250	
		Four FP 200 Gold (Fire alarm cable) (7mm diameter red cables)	

With exstended service supports up to 1000mm

Stopseal 50mm Batt both sides in Rigid & Flexible Walls with a minimum wall thickness of 100mm.				
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt. Cables and cable tray wrapped with stone wool insulation 40mm thick, 40kg/m³, 300mm long interrupted at the seal.	Electrical cables up to 21mm dia.	N/A	EI 120
		Electrical cables 33mm to 80mm dia.		
		Cable Trays and Ladders.		
		100mm diameter bundle telecommunication cable type "F".		
		Unsheathed electrical cables up to 17mm dia.		
		Unsheathed electrical cables 18-24mm dia.		
		Steel or Copper Conduits up to 16mm.		
		Plastic conduits up to 16mm.		

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FLEXIBLE AND RIGID WALLS

Stopseal 50mm Batt both sides in Rigid & Flexible Walls with a minimum wall thickness of 100mm.			
Aperture Size	**Seal Composition**	**Services**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	Blank Seal.	EI 120

Stopseal 50mm Batt both sides in Rigid & Flexible Walls with a minimum wall thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/continuous Elastomeric foam insulation 13 - 25mm thick.	C/U	2 Layers of 2mm thick 40mm wide PipeBloc EL installed within both Stopseal Batts.	E 120, EI 60
		Single copper or steel pipe 42mm diameter and 1mm wall thickness with sustained/continuous Elastomeric foam insulation 13 - 25mm thick.			EI 120
		Single copper or steel pipe 40 - 159mm diameter and 1.2 - 14.2mm wall thickness with sustained/continuous Elastomeric foam insulation 25mm thick.			EI 90

Stopseal 50mm Batt both sides in Rigid & Flexible Walls with a minimum wall thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	Single copper or steel pipe 40 - 108mm diameter and 1 - 14.2mm wall thickness with sustained/continuous Phenolic Foam insulation 25 - 40mm thick.	C/U	2 Layers of 2mm thick 40mm wide PipeBloc EL installed within both Stopseal Batts.	EI 90
		Single copper or steel pipe 42mm diameter and 1mm wall thickness with sustained/continuous Phenolic Foam insulation 25 - 40mm thick.			EI 120
		Single copper or steel pipe 40 - 108mm diameter and 1.2 - 14.2mm wall thickness with sustained/continuous Phenolic Foam insulation 40mm thick.			EI 120

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FLEXIBLE AND RIGID WALLS

Stopseal 50mm Batt both sides in Rigid & Flexible Walls with a minimum wall thickness of 100mm.					
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Seal**	**Classification**
600mm wide by 600mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Glass wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .	C/U	Cluster Formation of Pipes with 0mm separation.	E 120 , EI 90
		Single copper or steel pipe 40mm diameter and 1mm wall thickness with sustained/continuous Glass wool insulation ≥ 25mm thick with a density ≥ 30kg/m³.			EI 120
		Single copper or steel pipe 40mm diameter and 1mm wall thickness with sustained/continuous Stone wool insulation ≥ 25mm thick with a density ≥ 30kg/m³ .			EI 120
		Single copper or steel pipe 40 - 159mm diameter and 1 - 14.2mm wall thickness with sustained/ continuous Stone wool insulation ≥ 25mm thick with a density ≥ 30kg/m³.			E 120 , EI 90

PipeBloc PCP, Face Fixed onto Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides, PE, ABS & SAN+PVC Pipes.								
Aperture Size	**Seal Composition**	**Services**	**Collar Reference**	**Intumescent Material**	**Capping**	**Seal**	**Collar Fixing**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	PE Pipe 32mm Ø 2.9mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PE Pipe 40mm Ø 2.9mm Wall thickness	40mm PipeBloc PCP					
		PE Pipe 50mm Ø 2.9mm Wall thickness	50mm PipeBloc PCP					
		PE Pipe 55mm Ø 2.9mm - 4.4mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PE Pipe 63mm Ø 2.9mm - 4.4mm Wall thickness	63mm PipeBloc PCP					
		PE Pipe 75mm Ø 2.8mm - 6.7mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PE Pipe 82mm Ø 2.8mm - 6.7mm Wall thickness	82mm PipeBloc PCP					
		PE Pipe 90mm Ø 2.7mm - 10.0mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PE Pipe 100mm Ø 2.7mm - 10.0mm Wall thickness	100mm PipeBloc PCP					
		PE Pipe 110mm Ø 2.7mm - 10.0mm Wall thickness	110mm PipeBloc PCP					
		PE Pipe 125mm Ø 3.1mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PE Pipe 140mm Ø 3.9mm - 5.8mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PE Pipe 160mm Ø 4.9mm - 9.5mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

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FLEXIBLE AND RIGID WALLS

PipeBloc PCP, Face Fixed onto Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides, PP Pipes.								
Aperture Size	**Seal Composition**	**Services**	**Collar Reference**	**Intumescent Material**	**Capping**	**Seal**	**Collar Fixing**	**Classification**
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	PP Pipe 32mm Ø 2.9mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PP Pipe 40mm Ø 2.9mm Wall thickness	40mm PipeBloc PCP					
		PP Pipe 50mm Ø 2.9mm Wall thickness	50mm PipeBloc PCP					
		PP Pipe 55mm Ø 2.9mm - 4.4mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PP Pipe 63mm Ø 2.9mm - 4.4mm Wall thickness	63mm PipeBloc PCP					
		PP Pipe 75mm Ø 2.8mm - 6.7mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PP Pipe 82mm Ø 2.8mm - 6.7mm Wall thickness	82mm PipeBloc PCP					
		PP Pipe 90mm Ø 2.7mm - 10.0mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PP Pipe 100mm Ø 2.7mm - 10.0mm Wall thickness	100mm PipeBloc PCP					
		PP Pipe 110mm Ø 2.7mm - 10.0mm Wall thickness	110mm PipeBloc PCP					
		PP Pipe 125mm Ø 3.1mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PP Pipe 140mm Ø 3.5mm - 8.0mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PP Pipe 160mm Ø 4.0mm - 14.6mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

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FLEXIBLE AND RIGID WALLS

PipeBloc PCP, Face Fixed onto Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides, PVC-U & PVC-C Pipes.

Aperture Size	Seal Composition	Services	Collar Reference	Intumescent Material	Capping	Seal	Collar Fixing	Classification
750mm wide by 1200mm high	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	PVC Pipe 32mm Ø 1.8mm Wall thickness	32mm PipeBloc PCP	30mm (W) x 4mm (T)	U/C	Cluster Formation of Pipes with 0mm separation.	Fixed on both sides of wall with an 80mm Pig Tail Screw.	EI 120 U/C
		PVC Pipe 40mm Ø 1.8mm Wall thickness	40mm PipeBloc PCP					
		PVC Pipe 50mm Ø 1.8mm Wall thickness	50mm PipeBloc PCP					
		PVC Pipe 55mm Ø 2.3mm - 3mm Wall thickness	55mm PipeBloc PCP	30mm (W) x 6mm (T)				
		PVC Pipe 63mm Ø 2.3mm - 3mm Wall thickness	63mm PipeBloc PCP					
		PVC Pipe 75mm Ø 3.1mm - 4.8mm Wall thickness	75mm PipeBloc PCP	30mm (W) x 8mm (T)				
		PVC Pipe 82mm Ø 3.1mm - 4.8mm Wall thickness	82mm PipeBloc PCP					
		PVC Pipe 90mm Ø 4.2mm - 7.4mm Wall thickness	90mm PipeBloc PCP	30mm (W) x 10mm (T)				
		PVC Pipe 100mm Ø 4.2mm - 7.4mm Wall thickness	100mm PipeBloc PCP					
		PVC Pipe 110mm Ø 4.2mm - 7.4mm Wall thickness	110mm PipeBloc PCP					
		PVC Pipe 125mm Ø 6mm Wall thickness	125mm PipeBloc PCP	40mm (W) x 12mm (T)				
		PVC Pipe 140mm Ø 6.1mm - 7.5mm Wall thickness	140mm PipeBloc PCP	40mm (W) x 16mm (T)				
		PVC Pipe 160mm Ø 6.2mm - 9.5mm Wall thickness	160mm PipeBloc PCP	40mm (W) x 18mm (T)				

PipeBloc PWP, Installed into Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides.

Aperture Size	Seal Composition	Services	Pipewrap Reference	Intumescent Material	Capping	Seal	Classification
600mm x 600mm	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	40mm (1.8mm - 3.7mm wall thickness) PVC-U, PVC-C	PipeBloc PWP 40	2mm - 40mm width x 2	U/C	Cluster Formation of Pipes with 0mm separation.	EI 60
		200mm (7.7mm - 9.6mm wall thickness) PVC-U, PVC-C	PipeBloc PWP 200	10mm - 40mm width x 2			

PipeBloc PWP, Installed into Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides.

Aperture Size	Seal Composition	Services	Pipewrap Reference	Intumescent Material	Capping	Seal	Classification
600mm x 600mm	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	40mm (2.9mm - 4.6mm wall thickness) PE, ABS & SAN+PVC	PipeBloc PWP 40	2mm - 40mm width x 2	U/C	Cluster Formation of Pipes with 0mm separation.	EI 60
		200mm (11.9mm - 18.4mm wall thickness) PE, ABS & SAN+PVC	PipeBloc PWP 200	10mm - 40mm width x 2			

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FLEXIBLE AND RIGID WALLS

PipeBloc PWP, Installed into Stopseal Batt in Flexible Wall with a minimum thickness of 100mm both sides.							
Aperture Size	**Seal Composition**	**Services**	**Pipewrap Reference**	**Intumescent Material**	**Capping**	**Seal**	**Classification**
600mm x 600mm	Pattress installation of 50mm thick 140kg/m³ Stopseal Batt.	40mm (2.9mm - 6.9mm wall thickness) PP Pipes	PipeBloc PWP 40	2mm - 40mm width x 2	U/C	Cluster Formation of Pipes with 0mm separation.	EI 60
		200mm (4.9mm - 18.2mm wall thickness) PP Pipes	PipeBloc PWP 200	10mm - 40mm width x 2			

Performance Data - Floors

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Substrates

The floors shall be a minimum of **150mm thick**. Masonary / Concrete floors shall have a minimum density for concrete or brick of 780kg/m³ and for aerated concrete blocks of 600kg/m³. All floors shall have at least the same fire rating 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 unless specified otherwise in the performance data.

Terminology

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501-2:2007 + A1:2009, ETAG-026, Air Permeability EN1026, Sound EN10140. Fire resistance classes are: E = Integrity, the product can withstand the fire from the non-fire side, I =Insulation, the product can withstand the temperature travelling down the service, U/U = Uncapped inside and outside the furnace, U/C = Uncapped inside and Capped outside the furnace, C/U = Capped inside and Uncapped outside the furnace.

RIGID FLOOR

Single Stopseal 50mm Batt in Rigid Floors with a minimum thickness of 150 mm.				
Aperture size	**Seal composition**	**Service(s)**	**Position of service(s)**	**Classification**
1600mm wide by 700mm long	Single layer of 50 mm thick 140 kg/m³ Stopseal Coated Batt.	Blank seal	N/A	EI 60

Double Stopseal 50mm Batt in Rigid Floors with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	*500mm perforated cable tray.	20mm gap above penetration full 50mm depth of the Stopseal Coated Batt filled with PyroPro HPE.	50mm edge min.	EI120
		*Electrical cables up to 21mmØ.			E120 EI90
		* 'C1' Cable.			EI120
		* 'C2' Cable.			E120 EI60
		* 'C3' Cable.			EI120
* All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal.					

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RIGID FLOOR

Double Stopseal 50mm Batt in Rigid Floors with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	Uponor MLC (Multi-Layer Composite) Pipe 40mm Ø 4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Batt filled with PyroPro HPE.	50mm edge min.	EI120 U/C
		Uponor MLC (Multi-Layer Composite) Pipe 50mm Ø 4.5mm wall thickness.			E120 U/C EI60 U/C
		Uponor MLC (Multi-Layer Composite) Pipe 63mm Ø 6mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 75mm Ø 7.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 90mm Ø 8.5mm wall thickness.			
		Uponor MLC (Multi-Layer Composite) Pipe 110mm Ø 10mm wall thickness.			

Double Stopseal 50mm Batt in Rigid Floors with a minimum thickness of 150mm.					
Aperture Size	**Seal Composition**	**Services**	**Seal**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt	PVC 50mm - 125mm dia with 2.4mm - 7.4mm wall thickness.	20mm gap full 50mm depth of the Stopseal Batt filled with PyroPro HPE.	50mm edge min.	EI120 U/C

Double Stopseal 50mm Batt in Rigid Floors with a minimum thickness of 150mm.				
Aperture Size	**Seal Composition**	**Services**	**Position of Services**	**Classification**
1100mm x 750mm	Double layer of 50mm thick 140kg/m³ Stopseal Batt.	Copper/Steel Pipe 42mm Ø 1.2mm wall thickness.	50mm edge min.	EI120 C/U
1100mm x 750mm		Copper/Steel Pipe 42mm - 159mm Ø upto 14.2mm wall thickness.	50mm edge min.	E120 C/U EI30 C/U

Double Stopseal 2 x 50mm Batt in Rigid Floors with a minimum thickness of 150mm.				
Aperture Size	**Seal Composition**	**Services**	**Capping**	**Classification**
750mm wide by 1100mm high	Double layer of 50mm thick 140kg/m³ Stopseal Batt. Cables and cable tray wrapped with stone wool insulation 40mm thick, 40kg/m³, 300mm long interrupted at the seal **TOP SIDE ONLY.**	Electrical cables up to 21mm dia.	N/A	EI 90
		Electrical cables 33mm to 80mm dia.	N/A	EI 60
		Cable Trays.	N/A	EI 90
		Cable Ladders.	N/A	EI 60
		100mm diameter bundle telecommunication cable type "F".	N/A	E 90 , EI 60
		Unsheathed electrical cables up to 17mm dia.	N/A	EI 90
		Unsheathed electrical cables 18-24mm dia.	N/A	EI 90
		Steel or Copper Conduits up to 16mm.	N/A	EI 90
		Plastic conduits up to 16mm.	N/A	EI 90

Performance Data - Ducts

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Walls

The walls shall be a minimum of **100mm thick**. Drywalls shall comprise a minimum of 2 layers of 'Type F' Gypsum board on both faces, with minimum 50mm studs. Masonary / Concrete walls shall have a minimum density for concrete or brick of 780kg/m³ and for aerated concrete blocks of 600kg/m³. 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 unless specified otherwise in the performance data.

Terminology

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501-2:2007 + A1:2009, ETAG-026, Air Permeability EN1026, Sound EN10140. Fire resistance classes are: E = Integrity, the product can withstand the fire from the non-fire side, I =Insulation, the product can withstand the temperature travelling down the service, U/U = Uncapped inside and outside the furnace, U/C = Uncapped inside and Capped outside the furnace, C/U = Capped inside and Uncapped outside the furnace.

Floors

The floors shall be a minimum of **150mm thick**. Masonary / Concrete floors shall have a minimum density for concrete or brick of 780kg/m³ and for aerated concrete blocks of 600kg/m³. All floors shall have at least the same fire rating 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 unless specified otherwise in the performance data.

Terminology

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501-2:2007 + A1:2009, ETAG-026, Air Permeability EN1026, Sound EN10140. Fire resistance classes are: E = Integrity, the product can withstand the fire from the non-fire side, I =Insulation, the product can withstand the temperature travelling down the service, U/U = Uncapped inside and outside the furnace, U/C = Uncapped inside and Capped outside the furnace, C/U = Capped inside and Uncapped outside the furnace.

DUCTS

Feature General	Reference of tested sample Four sided duct (rectangular duct).	Allowed modification Covers four sided ducts.	Classification
Orientation	Test acc. EN 1366-8: Horizontal duct. Test acc. EN 1366-1: Horizontal and vertical duct, A and B type	Covers horizontal and vertical ducts made with the same design.	E 120 (ho) S 1000 multi
Size of duct	Inner cross section: 1000 mm (width) x 250 mm (height)	Covers: - Reduction - Increase of - Height: +750 mm - Width: +250 mm.	
Pressure	Tested at pressure level 2: (-1000 Pa) at ambient temperature and (-300 Pa) during fire test and calibration prior the test.	Covers - Pressures from (-1000 Pa) up to 500 Pa.	
Suspension devices	N/A	Suspension devices shall be made of steel and be sized such that the calculated stresses do not exceed the values: - 6 N/mm² for tensile stress in all vertically orientated components. - 10 N/mm² for shearing stress in screws of property class 4.6 according to EN 20898-1.	
Distances of Suspension devices	Maximum distances between hangers: 1500 mm Minimum distance between hangers and joints: 125 mm (measured outside the furnace). Distance between the outer vertical surface of the duct and the centre line of the suspension device: 50 mm. Tested joints inside the furnace: 3 Tested hangers inside the furnace: 3	Decrease of the distance between hangers, distance between the outer vertical surface of the duct and the centre line of the suspension device shall apply up to 50 mm, no reduction of the allowed.	
Support frame	See each test report.	- Same support frame as tested one.	

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DUCTS

Feature General	Reference of tested sample Horizontal duct	Modifications Covers horizontal ducts	Classification
Duct orientation	Duct type A horizontally assembled including branch.	- Covers type A duct horizontally assembled with or without branches. - Covers also the branches of a previously tested duct in vertical position.	E 60 (ho→i) S
Size of duct	Duct with an inner section of 1000mm x 500 mm.	- Decrease allowed. - Allowed increases are: - (+250) mm in width - (+500) mm in height.	
Pressure difference	Tested at underpressure of 500 Pa.	- Applicable to underpressures from 0 Pa to 500 Pa providing that the integrity criteria during the duct B test was satisfied.	
Suspension devices	Duct sustained with hangers. Largest distance between hangers: 1500 mm Shortest distance between hanger and joint: 120 mm Distances between outer duct surface and suspension device: 50 mm.	- Valid for steel elements with stresses not higher than the values given in table 8 of UNE EN 1366-1:2000. - Distance between hangers shall not surpass 1500 mm. - Distances between outer duct surface and suspension device shall not surpass 50 mm.	
Support construction	· Two fire resistance boards by Knauf of 12.5 mm in thickness each one, placed on both sides. · Internally insulated with a Rockwool panel of 40 mm thick and 100 kg/m^3.	- Only valid for the same tested flexible wall.	

Feature General	Reference of tested sample Four sided rectangular duct	Modifications Covers four sided rectangular ducts	Classification
Ducts orientation	Duct type B horizontally assembled.	Covers type B duct horizontally assembled.	E 60 (ho i→) (120 minutes of minimum operation)
Size of duct	Duct with rectangular section: 1000mm x 250 mm.	Decrease allowed. Permitted nominal internal dimensions are: Up to 1250 mm in width. Up to 1000 mm in height.	
Suspension devices	Duct sustained with rolled steel angle bearers. Largest distance between hangers: 1500 mm Distances between outer duct surface and suspension device: 50 mm.	Valid for steel elements with stresses not higher than the values given in table 7 of EN 1366- 1:2014. Distance between hangers shall not surpass 1500 mm. - Distances between outer duct surface and suspension device shall not surpass 50 mm.	
Support construction	Flexible wall made up: - Two boards of 12.5 mm thick - Insulation panel of 40 mm thick and 100 Kg/m^3.	- Valid for the supporting construction with a fire resistance equal or greater than that of the supporting construction used for the test (thicker, denser, as appropriate). - May be applied to rigid supporting constructions (as described in clause 7.2 of the Standard) of a thickness equal to or greater than the tested one.[1]	
[1] Provided that the classified fire resistance of the rigid supporting construction is greater than or equal to the one used for the test.			
Steel Ducts	Leakage class: C (acc. to EN 1507:2007) Non-combustible seals used stiffened steel duct.	- test result may be applied to those ducts having higher air tightness, (provided that the sealing materials used are of the same generic type) - test results do not comply for a duct with higher tightness achieved by combustible seals. - Only applied to ducts that are also stiffened in a similar manner.	
Fire stopping	Average gap between duct and the supporting construction: 100 mm.	Only smaller or equal gap is allowed to be used.	

Performance Data - Ducts

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DUCTS

Feature General	Reference of tested sample Allowed Rectangular duct	Modifications Covers rectangular ducts	Classification
Duct orientation	Ducts vertically assembled.	Covers vertical ducts without branches.	Vertical type A duct: E 120 (ve o→i) S
Size of ducts	Duct A with section 1000mm x 500 mm (width x height).	Decrease allowed. Allowed width increase + 250 mm. Allowed height increase + 500 mm.	
	Duct B with section 1000mm x 250 mm (width x height).	Decrease allowed. Allowed width increase + 250 mm. Allowed height increase + 750 mm.	
Pressure difference	Sample tested at 500 Pa of underpressure.	From 500 Pa of underpressure to 500 Pa of overpressure	
Duct supported at each storey	See test report (*)	Applicable to any number of storeys provided that: - Same layout as tested one. - Distance between supporting construction does not exceed 5m. - Limitations on buckling are satisfied (see below)	
Limitations on buckling duct A	Length of exposed duct (L): 2000 mm Smallest lateral dimensions (d): 500 mm Tested L/d ratio: 4	Test results are only applicable to situations where the L/d ratio does not exceed 8:1 If additional supports are provided, distance between supports or between supports and supporting constructions shall be considered as L.	Vertical type B duct: E 120 (ve i→o) s
Limitations on buckling duct B	Length of exposed duct (L): 2000 mm Smallest lateral dimensions (d): 250 mm Tested L/d ratio: 8	Test results are only applicable to situations where the L/d ratio does not exceed 8:1 If additional supports are provided, distance between supports or between supports and supporting constructions shall be considered as L.	
Support frame	Concrete slab 150 mm of thickness and 2100 kg/m^3	Applicable to slabs with a thickness equal to or more than 150 mm and density equal or more than 2100 kg/m3.	

** Test Report Held By FSi Ltd*

Extended Scope of Works

ETA 14-0005
CE-1121-CPR-JA5021

Direct field of application – DiAP and Extended Field of Application- EXAP

DiAP and EXAP rules are an output from European harmonization of fire testing methods, classifications and product standards where applicable. At a national level, experienced persons or fire test organisations have previously provided assessments of expected performance based on expert judgement and opinion, however these rules allow interpretation through the specific EN 1366 test standard.

DiAP and EXAP rules are provided in the EN 1366 and EN 15882 test standards series. They are derived from information obtained from tests carried out in accordance with relevant EN 1366 tests at recognised laboratories in Europe. The test results achieved by a particular design may be directly applied to a limited number of variations without recourse to expert advice, providing the design remains substantially as tested. EXAPs shall be based on primary test evidence to a specific part of the EN 1366 series and may be supplemented by appropriate test evidence generated from other sources, or other relevant historical data. The EXAP rules conside changes in the tested design beyond the scope of direct application and may also consider variations to the tested design.

Direct field of application - DiAP

Fire Stopping systems of this type are often complicated by extensive changes in modern buildings and their influence on the fire hazard should be considered carefully. The fire hazard can be reduced by providing penetration seals at the points where the services pass through fire separating elements (walls/floors).

The impact of fire on a construction or service system can vary considerably. A strict scientific approach to the problem of adequate testing of a sealing system would, therefore, be to design a series of tests each of which corresponds to a specified fire situation and arrangement. However, such an approach would probably fail due to its economic consequences, as tests of this type are very timeconsuming and costly. The method of test described in the EN 1366 series has therefore been designed with the intention of covering a wide range of fire situations in a minimum of tests. To allow a wider field of application, standard configurations are defined on the basis of general experience and historic data wherever possible. As frequently a number of influencing parameters was considered when defining the standard configurations, not all of which may be addressed explicitly in the field of direct application rules (e.g. metalscreen of cables). To allow nevertheless flexibility a modular approach was taken as far as possible so that various combinations of standard configuration elements can be used to fit the needs of the user.

Where a nonstandard configuration was used, the field of application is restricted to what was tested, however the field of direct application rules given in the various parts of the EN 1366 series may be applied, subject to deviating rules given in the annexes of each part. Rules cover supporting construction, orientation, penetrating services, service supports, penetration seal size, distances and overall configurations of penetration seal materials and services to be included.

Extended Field of Application- EXAP

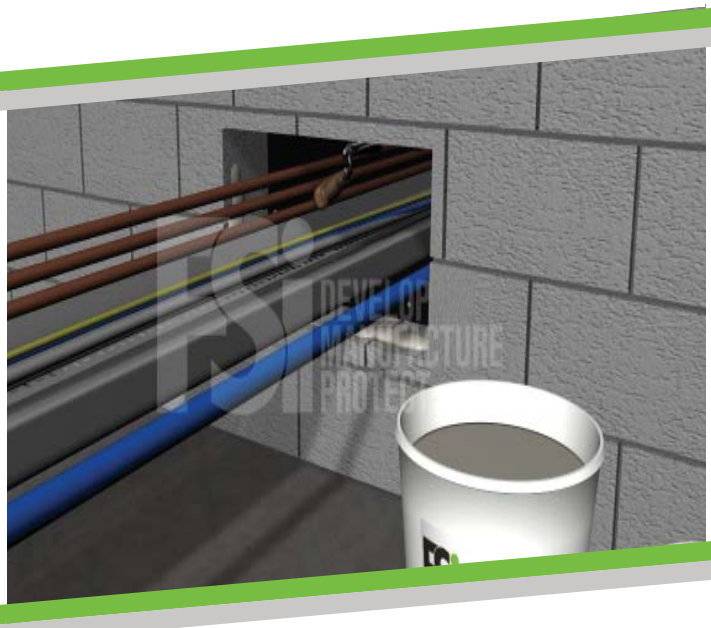
The purpose EXAP document is to provide the principles and guidance for the preparation of extended application documents for penetration sealing systems tested in accordance with the EN 1366 and EN 15882 series. The field of the extended application document is additional to the direct field of application given within the relevant part of EN 1366 and may be applied to or based on a single test, or a number of tests, which provide the relevant information for the formulation of an extended application.

There are a number of practical limitations on the size and design of elements that can be tested by the standard methods of fire resistance test. When these elements are required to be larger, or are of a modified design, there is a necessity to be able to confirm their performance, without the ability of being able to test them. To achieve this, extended application documents for the various elements are used.

Due to the diverse nature of materials and constructions used to seal openings in fire resistant separating elements it has been necessary to separate the extended application principles into generic seal types within the specific EXAP EN 15882 series. Often more than one variation is to be incorporated, should this be the case the overall effect shall be considered. Principles common to all generic seal types are given in the EXAP and rules for each specific generic seal type are given. The Annex provide rules for the application of test results and provides information relating to the extended application of those test results on for service penetrations.

Variables for each seal type, which require consideration included are as follows:

1) Separating element;
2) Type of service;
3) Size of service;
4) Seal size and configuration
5) Material changes (components or formulation) – comparison test approach, reduced test program
6) Orientation
7) Penetration seals at the head of walls (like a linear joint) – consider the issue of movement
8) Penetration seals at slab edges (like a linear joint) – consider the issue of movement
9) Distances of penetration seals to other openings in the separating element e.g. doors



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