



#### CERTIFICATE OF APPROVAL No CF 5127

This is to certify that, in accordance with TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

#### **FSI LIMITED**

Westminster Industrial Estate, Tamworth Road, Measham DE12 7DS

Tel: 01530 515130 Fax: 01530 273564

Have been assessed against the requirements of the Technical Schedule(s) denoted below and are approved for use subject to the conditions appended hereto:

CERTIFIED PRODUCT Pyropro HPE

TECHNICAL SCHEDULE
TS03 Penetration Sealing
Systems & TS40 Linear Joint
Systems

Signed and sealed for and on behalf of Exova (UK) Limited trading as Warrington Certification

Paul Duggan
Certification Manager



Issued: 23<sup>rd</sup> November 2012 Reissued: 10<sup>th</sup> November 2017 Valid to: 9<sup>th</sup> November 2022

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#### **Pyropro HPE SEALANT**

- This approval relates to the use of Pyropro HPE intumescent sealant pipe closure and linear joint systems for fire protection where there are services penetrating walls or where by substrates abut. The detailed scope is given in the Approval Matrix included in this Certificate. This shows the acceptable configurations to provide fire resistance periods in accordance with BS EN 1366-3: 2009 and BS EN 1366-4: 2006 of up to 120 minutes for differing services and elements of construction.
- 2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland), Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.'
- 3. The product is approved on the basis of:
  - i) Initial type testing
  - ii) Audit testing at the frequency specified in TS03
  - iii) A design appraisal against TS03
  - iv) Inspection and surveillance of factory production control
  - v) Production surveillance under ISO 9001:2008
- 4. The masonry or concrete walls and drywalls shall be at least 100 mm thick and have at least the same fire rating as that required for the penetration seal.
- 5. The services which may be fitted through the seals are PVC, HDPE, ABS, PP insulated copper pipes and cables as detailed within the Approval Matrix included in this Certificate.
- 6. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

#### **Further Information**

Further information regarding the details contained in this data sheet may be obtained from FSi Limited (Tel: 01530 515130).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel:01925 646777, website: www.warringtoncertification.com)

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls - Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Wall Thickness	Inte	egrity	Ins	sulation			
PVC – 125mm Ø by 4.8-7.2 mm wall thickness	16 mm annulus x 25mm deep	Stone wool 30mm deep nominal 80kg/m <sup>3</sup>								
PVC – 40mm Ø by 1.9- 3 mm wall thickness HDPE – 90mm Ø by 9.2 mm wall thickness	10 mm annulus x 25mm deep 12.5 mm annulus x 25mm deep			120 r	120 minutes		minutes			
ABS – 90mm Ø by 6mm wall thickness	12.5 mm annulus x 25mm deep	N/A	_	120 mm						
Copper/Steel – 60mm Ø by 0.8-14.2mm wall thickness, with 32mm Armaflex insulation	20 mm annulus x 25mm deep			N/A	N/A		120 minutes 9		90	minutes
Copper/Steel –13 Ø by 0.8-7mm wall thickness, with 13mm Armaflex insulation	12 mm annulus x 25mm deep				120 minutes		120	minutes		
Walls	The walls shall be a min 2 layers of 'Type F' Gyp Masonry/concrete walls 780kg/m <sup>3</sup> and for aerate the same fire rating as t	sum board on be shall have a med concrete bloo	ooth faces, with inimum density cks of 600kg/m	minimu for con 3. All w	um 50 mr icrete or l valls shall	n stuc orick c	ls. of			
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm, with the Pyrpro HPE intumescent sealant material both faces of the substrate.					pace				
Service Coat-Back :	Not required				U Value		Not known			
Service Support Requirements: Services should be rigidly supported via steel angles, hangars or channels, not further than 150 mm and 450 mm from the surface of the sealing system on both faces.										

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Wall Thickness	Integrity	Insulation
HDPE – 63mm Ø by 7.2 mm wall thickness with Cables up to Ø 21mm	300mm wide x 100mm high x 25mm deep	N/A	120 mm	120 minutes	120 minutes
Cables up to Ø 21mm	300mm wide x 100mm high x 25mm deep				
Walls	The walls shall be a min of 2 layers of 'Type F' G Masonry/concrete walls 780kg/m <sup>3</sup> and for aerate the same fire rating as the	ypsum board o shall have a m ed concrete bloo	n both faces, w inimum density cks of 600kg/m	rith minimum 50 for concrete or <sup>3</sup> . All walls shal	mm studs. brick of
Application Technique:	The hole for the pipe shall then be positioned space shall be in-filled to material both faces of the	centrally within o min 25mm, w	the hole and th	hen the remainir	ng annular
Service Coat-Back :	Not required U Value: Not known				
Service Support Requirements:  Services should be rigidly supported via steel angles, hangars or channels, not further than 150 mm and 450 mm from the surface of the sealing system on both faces.					

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls - Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Wall Thickness	Inte	grity	Ins	sulation		
PVC – 40mm Ø by 1.9mm wall thickness				120 n	ninutes	120	minutes		
PVC – 125mm Ø by 9.2 mm wall thickness				60 m	inutes	60	minutes		
HDPE – 90mm Ø by 9.2 mm wall thickness		N/A	N/A	N/A	N/A 100 mm				
ABS – 40mm Ø by 1.9mm wall thickness	20 mm annulus x 25mm deep					100 mm	120 minutes	ninutes	120 minu
HDPP – 40mm Ø by 1.9mm wall thickness	23mm deep								
Copper/Steel –40mm – 159mm Ø by 2mm- 14.2mm wall thickness, with 32mm Armaflex insulation (LS650mm)				120 n	ninutes	30	minutes		
Walls	The walls shall be a min 2 layers of 'Type F' Gyp Masonry/concrete walls 780kg/m <sup>3</sup> and for aerate the same fire rating as the	sum board on be shall have a med and concrete bloom that required for	ooth faces, with inimum density cks of 600kg/m the pipe closu	minimutor for con  in All was system  in Minimutor of the	um 50 mr crete or k valls shall m.	n stud orick o have	ls. of at least		
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm, with the Pyrpro HPE intumescent sealant material both faces of the substrate.						pace		
Service Coat-Back :	Not required				U Value	e:	Not known		
Service Support Requirements:  Services should be rigidly supported via steel angles, hangars or channels, not further than 270 mm from the surface of the sealing system on both faces.									

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

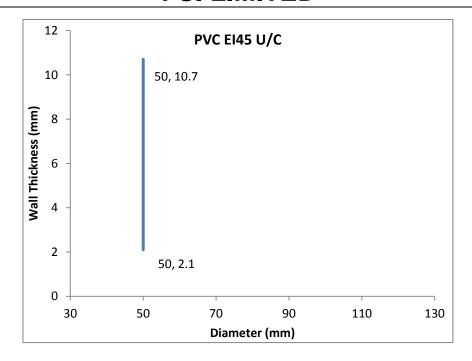
Pipe Size and Type	Pyropro HPE Dimensions	Stopseal Coated Batt	Minimum Wall Thickness	Integrity	Insulation
Pipe Diameters As Below	20mm annulus full 50mm depth of the Stopseal Coated Batt	Single layer of 50mm Stopseal Coated Batt max 1100mm high x 750mm wide	150 mm	Rating As Per Graphs Below	
Walls	minimum density for o	nimum of 150 mm thic concrete of 780kg/m <sup>3</sup> a hall have at least the s	nd for aerated	concrete block	s of
Application Technique:	space. The pipe shall	Batt should be cut and then be positioned cer ace shall be in-filled to naterial.	ntrally within the	e hole and the	n the
Service Coat-Back :	Not required			U Value:	Not known
Service Support Requirements:		gidly supported via stee surface of the sealing			ls, not further

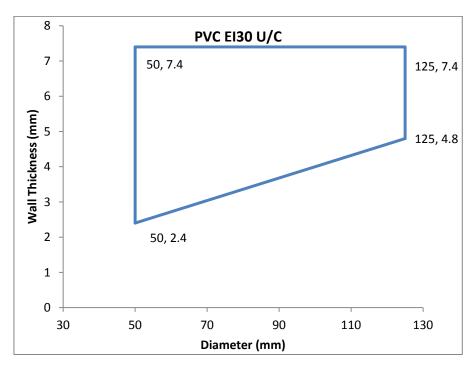
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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Stopseal Coated Batt	Minimum Wall Thickness	Integrity	Insulation
Uponor MLC (Multi-Layer Composite) Pipe 40mm ø 4mm wall thickness  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 910mm ø 10mm wall thickness	20mm annulus full 50mm depth of the Stopseal Coated Batt	Single layer of 50mm Stopseal Coated Batt max 1100mm high x 750mm wide	150 mm	45 minutes	30 minutes
Walls	have a minimu blocks of 600k	be a minimum of 150 m density for concret g/m <sup>3</sup> . All walls shall e pipe closure system	e of 780kg/m <sup>3</sup> a have at least th	and for aerate	d concrete
Application Technique:	The Stopseal Coated Batt should be cut and installed to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to full depth of 50mm with the Pyrpro HPE intumescent sealant material.				
Service Coat-Back :	Not required			U Value:	Not known
Service Support Requirements:	Services should be rigidly supported via steel angles, hangars or channels, not further than 450 mm from the surface of the sealing system on both faces				

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Penetration Type	Pyropro HPE Dimensions	Stopseal Coated Batt	Minimum Wall Thickness	Integrity	Insulation
500mm perforated cable tray				30 minutes	30 minutes
Electrical cables up to 21mm ø	20mm annulus full	Single layer of 50mm Stopseal			
1 off 'C1' Cable	50mm depth of the	Coated Batt max 1100mm high x	150 mm		
1 off 'C2' Cable	Stopseal Coated Batt	750mm wide		45 minutes	45 minutes
1 off 'C3' Cable	Coaled Ball				
Walls	have a minimu blocks of 600kg	be a minimum of 150 m density for concret g/m <sup>3</sup> . All walls shall e pipe closure system	te of 780kg/m³ have at least th	and for aerate	d concrete
Application Technique:	The Stopseal Coated Batt should be cut and installed to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to full depth of 50mm with the Pyrpro HPE intumescent sealant material.				
Service Coat-Back :	*All cables coated with 2mm DFT PST Coating 300mm along the cables both sides of the seal U Value: Not known				
Service Support Requirements:	Services should be rigidly supported via steel angles, hangars or channels, not further than 450 mm from the surface of the sealing system on both faces				

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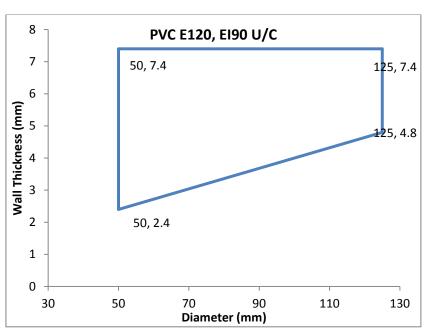




#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls - Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Stopseal Coated Batt	Minimum Wall Thickness	Integrity	Insulation	
Pipe Diameters As Below	20mm annulus full 25mm depth both faces of the Stopseal Coated Batt	Double layer of 50mm Stopseal Coated Batt max 1100mm high x 750mm wide	150 mm	Rating As Per Graphs Below		
Walls	minimum density for c	nimum of 150 mm thic concrete of 780kg/m <sup>3</sup> a hall have at least the s	nd for aerated	concrete block	s of	
Application Technique:						
Service Coat-Back :	Not required U Value: Not known					
Service Support Requirements:  Services should be rigidly supported via steel angles, hangars or channels, not further than 450 mm from the surface of the sealing system on both faces						

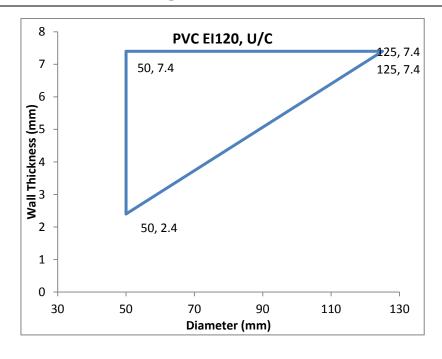


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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE	Stopseal Coated Batt	Minimum Wall	Integrity	Insulation	
	Dimensions		Thickness			
Uponor MLC (Multi-Layer						
Composite) Pipe 40mm ø 4mm						
wall thickness						
Uponor MLC (Multi-Layer						
Composite) Pipe 50mm ø	20mm					
4.5mm wall thickness						
Uponor MLC (Multi-Layer						
Composite) Pipe 63mm ø 6mm	annulus full	Double layer of				
wall thickness	25mm depth	50mm Stopseal	150 mm	120	120	
Uponor MLC (Multi-Layer	both faces of	Soc of Sullin Stopseal	150 mm	minutes	minutes	
Composite) Pipe 75mm ø	the Stopseal Coated Batt max 1100mm high x 750mm wide	the Stopseal 110				
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						
Walls	have a minimu blocks of 600k	oe a minimum of 150 m density for concret g/m³. All walls shall	e of 780kg/m <sup>3</sup> have at least th	and for aerate	d concrete	
	required for the	e pipe closure system	١.			
	The Stopseal (	Coated Batt should be	e cut and instal	led to suit the	required	
Application Technique	annular space.	The pipe shall then	be positioned o	entrally within	the hole and	
Application Technique:	then the remaining annular space shall be in-filled min 25mm to the both					
	faces, with the	Pyrpro HPE intumes	cent sealant m	aterial.		
Service Coat-Back :	Not required			U Value:	Not	
Service Coat-Dack :				o value:	known	
Service Support	Services shoul	d be rigidly supported	d via steel angl	es, hangars or	channels,	
Requirements:	not further thar	n 450 mm from the su	urface of the se	aling system of	n both faces	

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

,	Pyropro	Stopseal Coated	Minimum		
Penetration Type	HPE	Batt	Wall	Integrity	Insulation
	Dimensions		Thickness		
500mm perforated cable tray					
Electrical cables up to 21mm ø		Double layer of 50mm Stopseal			120 minutes
1 off 'C1' Cable	annulus full 25mm depth	Coated Batt max 1100mm high x	450	120	
1 off 'C2' Cable	both faces of the Stopseal	750mm wide	150 mm	minutes	90 minutes
1 off 'C3' Cable	Coated Batt				120
					minutes
	The wall shall I	oe a minimum of 150	mm thick. Mas	onry/concrete	walls shall
Welle		m density for concret			
Walls		g/m³. All walls shall e pipe closure system		ne same fire ra	ating as that
	The Stopseal C	Coated Batt should be	e cut and instal	led to suit the	required
Application Technique:	annular space.	The pipe shall then I	be positioned c	entrally within	the hole and
Application reclinique.		ning annular space s			the both
	•	Pyrpro HPE intumes		aterial.	
Service Coat-Back :		ted with 2mm DFT P	•	U Value:	Not
		he cables both sides			known
Service Support		d be rigidly supported			
Requirements:	not further thar	1 450 mm from the su	urface of the se	aling system o	on both faces

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Approval Matrix Walls – Py Pipe Size and Type	Pyropro	Stopseal Coated	Minimum			
i ipe Size and Type	HPE	Batt	Wall	Integrity	Insulation	
(0)	Dimensions		Thickness			
Copper/Steel Pipe 40mm ø						
1.5mm -14.2mm wall thickness,						
insulated with 20mm thick foil				60 minutes	60 minutes	
faced glasswool insulation min						
density 80kg/m3 (CS) Continued Sustained						
Copper/Steel Pipe 159mm ø						
2.3mm -14.2mm wall thickness,	15mm					
insulated with 30mm thick foil	annulus,					
faced glasswool insulation min	15mm deep					
density 80kg/m3 (CS) Continued	both faces of					
Sustained	the Stopseal Coated Batt,	Single layer of	100 mm	90 minutes	60 minutes	
Steel Pipe 40mm ø 1.7mm -	incorporating	50mm Stopseal	100 11111	30 minutes	00 minutes	
14.2mm wall thickness,	a 15mm fillet	Coated Batt max				
insulated with 20mm thick foil	projecting	600mm high x				
faced glasswool insulation min	from the face	600mm wide				
density 80kg/m3 (CS) Continued Sustained	of the seal					
Steel Pipe 150mm ø 2.3mm -			<u> </u>			
14.2mm wall thickness,						
insulated with 30mm thick foil				00	00	
faced glasswool insulation min				60 minutes	60 minutes	
density 80kg/m3 (CS) Continued						
Sustained						
		be a minimum of 10				
		ayers of 'Type F' Gyr				
Walls		Masonry/concrete wa ck of 780kg/m³ and fo				
		nave at least the sam				
	closure system		e ille ratilig as	ınat required i	or trie pipe	
		Coated Batt should be	e cut and install	ed to suit the	required	
Application Tochnique	annular space. The pipe shall then be positioned centrally within the hole and					
Application Technique:	then the remaining annular space shall be in-filled to min 15mm to the both					
		Pyrpro HPE intumes	cent sealant ma	aterial.		
Service Coat-Back :	Not required			U Value:	Not	
	0	at the second second second	1		known	
Service Support		d be rigidly supported				
Requirements:	not further than 450 mm from the surface of the sealing system on both faces					

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Walls – Pyropro HPE EN 1366-3

Partial Penteration Size and Type	Pyropro HPE	Backing Material	Minimum Wall	Integrity	Insulation
,.	Dimensions		Thickness	0 ,	
Uponor water valve with tap unit fitted to project from the unexposed face of the partition	10 wide by 25 mm mm depth				
Uponor water valve with tap unit fitted to project from the exposed face of the partition	applied flush with the unexposed face of the wall	N/A	100 mm	120 minutes	120 minutes
Walls		be a minimum of 10 ayers of 'Type F' Gyp			
Application Technique:	The hole for the pipe shall be cut through the parttion to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm to the both faces, with the Pyrpro HPE intumescent sealant material.				
Service Coat-Back :	Not required			U Value:	Not known
Service Support Requirements:	N/A				

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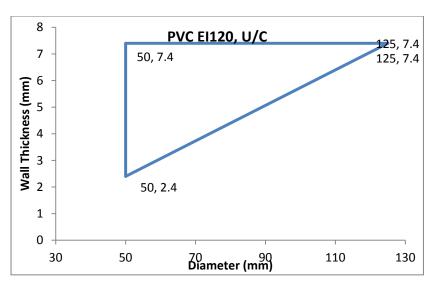




#### Pyropro HPE INTUMESCENT SEALANT

**Approval Matrix Floors – Pyropro HPE EN 1366-3** 

Pipe Size and Type	Pyropro HPE Dimensions	Stopseal Coated Batt	Minimum Floor Thickness	Integrity	Insulation	
Pipe Diameters As Below	20mm annulus full 25mm depth both faces of the Stopseal Coated Batt	Double layer of 50mm Stopseal Coated Batt max 1100mm high x 750mm wide	150 mm	Rating As Per Graphs Below		
Floors	minimum density for d	inimum of 150 mm thic concrete of 780kg/m <sup>3</sup> a shall have at least the	nd for aerated	concrete block	s of	
Application Technique:						
Service Coat-Back :	Not required U Value: Not known					
Service Support Requirements:  Services should be rigidly supported via steel angles, hangars or channels, not further than 450 mm from the surface of the sealing system on both faces						

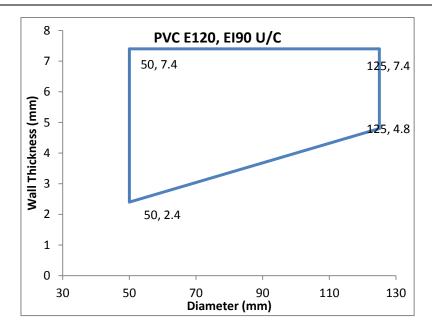


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#### Pyropro HPE INTUMESCENT SEALANT

**Approval Matrix Floors – Pyropro HPE EN 1366-3** 

Pipe Size and Type	Pyropro HPE	Stopseal Coated Batt	Minimum Floor	Integrity	Insulation		
	Dimensions		Thickness	0 ,			
Uponor MLC (Multi-Layer				120	120		
Composite) Pipe 40mm ø 4mm				minutes	minutes		
wall thickness				minutes	minutes		
Uponor MLC (Multi-Layer							
Composite) Pipe 50mm ø							
4.5mm wall thickness							
Uponor MLC (Multi-Layer	20mm						
Composite) Pipe 63mm ø 6mm	annulus full	Double layer of					
wall thickness	25mm depth 50mm Stopseal		150 mm				
Uponor MLC (Multi-Layer	both faces of	Coated Batt max	130 11111	120 minutes	60 minutes		
Composite) Pipe 75mm ø	the Stopseal	1100mm long x					
7.5mm wall thickness	Coated Batt	Coated Batt 750mm wide					
Uponor MLC (Multi-Layer							
Composite) Pipe 90mm ø							
8.5mm wall thickness							
Uponor MLC (Multi-Layer							
Composite) Pipe 110mm ø							
10mm wall thickness							
	The floor shall	be a minimum of 150	mm thick. Ma	sonry/concrete	e floors shall		
Floors	have a minimum density for concrete of 780kg/m <sup>3</sup> and for aerated concrete						
FIGUIS	blocks of 600kg/m <sup>3</sup> . All floors shall have at least the same fire rating as that						
	required for the	e pipe closure system	۱.				
	The Stopseal Coated Batt should be cut and installed to suit the requ						
Application Technique:	annular space. The pipe shall then be positioned centrally within the hole and						
Application reclinique.	then the remaining annular space shall be in-filled min 25mm to the both						
	faces, with the Pyrpro HPE intumescent sealant material.						
Service Coat-Back :	Not required			U Value:	Not		
				known			
Service Support	Services should be rigidly supported via steel angles, hangars or channels,						
Requirements:	not further than 450 mm from the surface of the sealing system on both face						

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Floors - Pyropro HPE EN 1366-3

	Pyropro	Stopseal Coated	Minimum				
Penetration Type	HPE	Batt	Floor	Integrity	Insulation		
	Dimensions		Thickness				
500mm perforated cable tray							
Electrical cables up to 21mm ø	20mm	750mm wide	150 mm		120 minutes		
1 off 'C1' Cable	annulus full 25mm depth			120 minutes			
1 off 'C2' Cable	both faces of the Stopseal Coated Batt				90 minutes		
1 off 'C3' Cable					120		
					minutes		
	The floor shall	be a minimum of 150	mm thick. Mas	sonry/concrete	e floor shall		
Floore	have a minimum density for concrete of 780kg/m <sup>3</sup> and for aerated concrete						
Floors	blocks of 600kg/m <sup>3</sup> . All floor shall have at least the same fire rating as that required for the pipe closure system.						
	The Stopseal C	Coated Batt should be	e cut and instal	led to suit the	required		
Application Technique:	annular space. The pipe shall then be positioned centrally within the hole and						
Application reclinique.	then the remaining annular space shall be in-filled min 25mm to the both						
	faces, with the Pyrpro HPE intumescent sealant material.						
Service Coat-Back :	*All cables coated with 2mm DFT PST Coating  U Value:						
Jei vice Joai-Dack .	300mm along the cables upper side of the seal kno						
Service Support	Services should be rigidly supported via steel angles, hangars or channels,						
Requirements:	not further than 450 mm from the surface of the sealing system on both faces						

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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Floors - Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Floor Thickness	Inte	grity	Ins	ulation		
Electrical cables up to 21mm Ø				180 n	ninutes	20 ו	minutes		
Electrical cables 22- 80mm Ø	Max 200mm x 200mm			120 n	120 minutes		minutes		
Non sheathed electrical cables up to 24mm Ø	Min 50mm x 50mm	100mm		180 minutes		15 ו	minutes		
Up to 21mm Ø telecom cables in bundles of up to 100mm Ø		deep stone wool 45kg/m <sup>3</sup>	150 mm	180 minutes		15 ו	minutes		
Copper/Steel –41mm – 159mm Ø by 2.5mm- 14.2mm wall thickness, with 16mm - 32mm Armaflex insulation (CS)	20 mm annulus x 25mm deep			120 m	ninutes	120	minutes		
Floor	The floor shall be a minimum of 150 mm thick. Masonry/concrete floors shall have a minimum density for concrete 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 pipe closure system.								
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm to the upper surface, with the Pyrpro HPE intumescent sealant material.								
Service Coat-Back :	I I Value.						Not known		
Service Support Requirements:									

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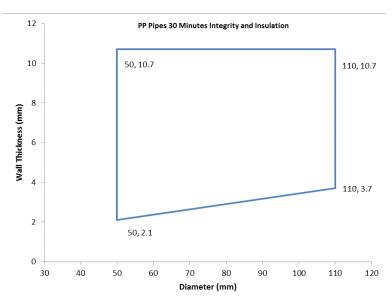




#### Pyropro HPE INTUMESCENT SEALANT

**Approval Matrix Floors – Pyropro HPE EN 1366-3** 

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Floor Thickness	Inte	grity	Insulation		
PP Pipe 110mm Ø 3.7mm wall thickness		25mm deep(both deep stone wool		30 minutes		30 minutes		
PP Pipe 50mm Ø 10.7mm wall thickness	20 mm annulus x 25mm deep(both		150 mm	120 m	ninutes	120 minutes		
PP Pipe 110mm Ø 2.1mm wall thickness	faces)	45kg/m <sup>3</sup>		240 m	ninutes	240 minutes		
Floors	The floor shall be a minimum of 150 mm thick. Masonry/concrete floors shall have a minimum density for concrete 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 pipe closure system.							
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm to the both faces, with the Pyrpro HPE intumescent sealant material.							
Service Coat-Back :	Not required \(\text{\chi}\)					Not known		
Service Support Requirements:	Services should be rigidly supported via steel angles, hangars or channels, not further than 270 mm from the surface of the sealing system on upper face							



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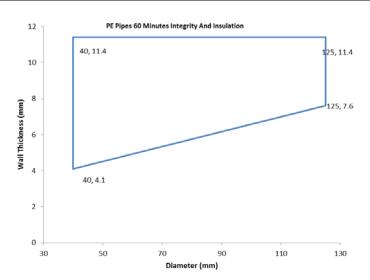




#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix Floors - Pyropro HPE EN 1366-3

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Floor Thickness	Inte	grity	Ins	sulation	
PE Pipe 125mm Ø 7.6mm wall thickness		100mm 60 minutes		60	minutes			
PE Pipe 125mm Ø 11.4mm wall thickness	20 mm annulus x 25mm deep(both	deen stone	150 mm	90 minutes		90	minutes	
PE Pipe 40mm Ø 4.1mm wall thickness	faces)			240 m	ninutes	240	minutes	
Floors	The floor shall be a minimum of 150 mm thick. Masonry/concrete floors shall have a minimum density for concrete 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 pipe closure system.							
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm to the both faces, with the Pyrpro HPE intumescent sealant material.							
Service Coat-Back :	Coat-Back : Not required				U Value	<b>∋</b> :	Not known	
Service Support Requirements:	Services should be rigidly supported via steel angles, hangars or channels, not further than 270 mm from the surface of the sealing system on the upper face							



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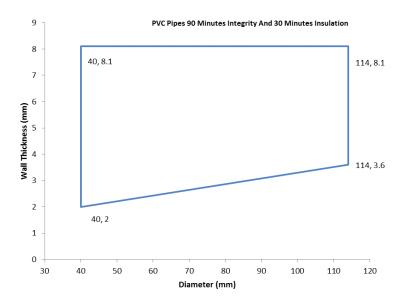




#### Pyropro HPE INTUMESCENT SEALANT

**Approval Matrix Floors – Pyropro HPE EN 1366-3** 

Pipe Size and Type	Pyropro HPE Dimensions	Backing Material	Minimum Floor Thickness	Integrity	Ins	sulation		
PVC Pipe 40mm Ø 2mm wall thickness		100mm		240 minute	s 240	) minutes		
PVC Pipe 114mm Ø 3.6mm wall thickness	20 mm annulus x 25mm deep(both	annulus x deep(both wool	150 mm	90 minutes	45	minutes		
PE Pipe 114mm Ø 8.1mm wall thickness	faces)	45kg/m <sup>3</sup>		120 minute	s 120	) minutes		
Floors	The floor shall be a minimum of 150 mm thick. Masonry/concrete floors shall have a minimum density for concrete 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 pipe closure system.							
Application Technique:	The hole for the pipe shall be drilled to suit the required annular space. The pipe shall then be positioned centrally within the hole and then the remaining annular space shall be in-filled to min 25mm to the both faces, with the Pyrpro HPE intumescent sealant material.							
Service Coat-Back :	Not required	U Va	lue:	Not known				
Service Support Requirements:	Services should be rigidly supported via steel angles, hangars or channels, not further than 270 mm from the surface of the sealing system on the upper face							



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#### Pyropro HPE INTUMESCENT SEALANT

Approval Matrix - Pyropro HPE EN 1366-4

Wall Installatio									
Product Name Pyropro HPE									
Joint Width mm	Depth mm	Backing Materia	al Gap Face Material		Integrity (mins)	Insulation (mins)			
20	25	PE Backing AAC/DW		120	120				
Application Technique	Compress backing material into gap/joint to form a pocket of the correct depth for the sealant to finish flush with the surface of the wall, then infill with Pyropro HPE to a depth off 25mm. The seal is required to be formed on <b>both</b> faces/sides of the wall.								
Walls	The walls shall be a minimum of 100 mm thick. Drywalls shall comprise a minimum of 2 layers of 'Type F' Gypsum board on both faces, with minimum 50 mm studs.  Masonry/concrete walls shall have a minimum density for concrete or brick of 780kg/m <sup>3</sup> and for aerated concrete blocks of 600kg/m <sup>3</sup> . All walls shall have at least the same fire rating as that required for the pipe closure system.								
Resistance to Smoke:		ated by this approval		Not evaluated by this					
Acoustic Rating:	BMT/MTP F	-14022	Mov	vement Capability:	Not evaluate approval	ted by this			
Air Permeability:	Chilt/P1208	3/10							

AAC - Autoclaved aerated concrete

PE - Polyethylene DW - Drywall

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