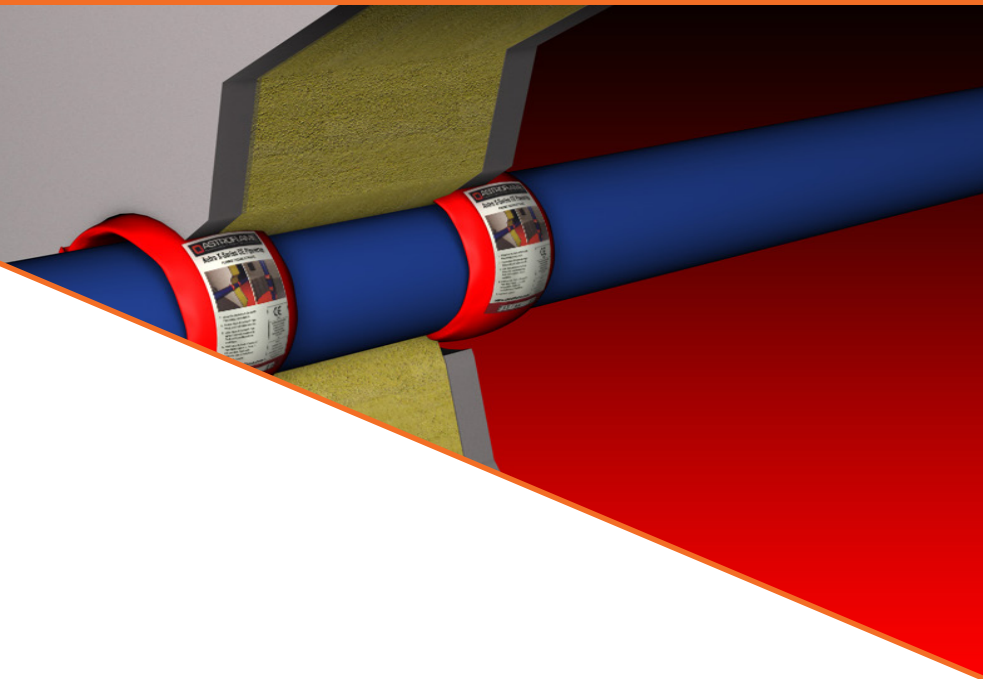


Technical Data Sheet

Astro X-Series CE Pipe Wrap

Revision 13 - 13th January 2021





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General Product Description

Astro X Series CE Pipe Wrap are designed and tested to seal service penetration apertures containing plastic and metallic pipes, pipes with insulation, using thermoplastic composites based on graphite Intumescent technology. Developed to provide a high volume expansion and pressure seal during a fire. The Astro X Series CE Pipe Wrap offers EI120 tested to EN1366-3, the maximum diameter being 250mm, the ultra thin design of Astro X Series CE Pipe Wrap ensuring that they can be installed in to the tightest of locations.

Astro X Series CE Pipe Wrap can be installed in flexible wall, rigid wall, rigid floor constructions and in Batt seals. They are compatible with polypropylene (PP), polyethylene (PE) and polyvinylchloride (PVC) pipes.

Astro X Series CE Pipe Wrap is used around combustible pipes to form a penetration seal used to reinstate the fire resistance performance of wall and floor constructions, where they have been provided with apertures for the penetration of combustible pipe services.

Astro X Series CE Pipe Wrap include an intumescent component incorporated into a lightweight PVC carrier bag to close any gaps and joints and provide a closure of combustible pipes when heated and to prevent the passage of fire.

Astro X Series CE Pipe Wrap are supplied in assembled form. The intumescent in the wrap is contained within a lightweight PVC carrier bag and is installed around the pipe at the soffit or both faces of walls, depending on. Fixing details are provided in annex A.

The applicant has submitted a written declaration that the product and/or constituents of the product contains no substances which have been classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No. 1272/2008 and listed in the 'indicative list on dangerous substances' of the EGDS – taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

The use category of Astro X Series CE Pipe Wrap in relation to BWR 3 (Hygiene, health and environment) is IA1, S/W3.

External use- ETAG 026-2 (used as European Assessment Document EAD) Type X: Intended for use in conditions exposed to weathering.

Specification Of The Intended Use In Accordance With The Relevant EAD

Intended Use

The intended use of Astro X Series CE Pipe Wrap is to reinstate the fire resistance performance of wall and floor constructions, where they are penetrated by various combustible pipe services.

The specific elements of construction that the system Astro X Series CE Pipe Wrap may be used is as follows:

Flexible walls:

The wall must have a minimum thickness of 100 mm and comprise timber or steel studs line on both faces with minimum 2 layers of 12.5 mm thick, 'Type F' Gypsum boards according to EN 520. In timber stud walls, no part of the penetration seal shall be closer than 100mm to a stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1, is provided within the cavity between the penetration seal and the stud.

Rigid walls:

The wall must have a minimum thickness of 100 mm and comprise of concrete, aerated concrete or masonry, with a minimum density of 650 km/m³.

Rigid floor:

The floor must have a minimum thickness of 150 mm and comprise of concrete, aerated concrete or masonry, with a minimum density of 650 km/m³.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The system Astro X Series CE Pipe Wrap may be used to provide a penetration seal with specific combustible pipes, single only.

Apertures in the separating element shall be maximum 10 mm diameter oversize with respect to the pipe diameter. The remaining annular space/gap shall be infilled with Astro Intu Mastic for the purpose of providing a smoke seal. Apertures for the penetration of pipes shall be separated by a minimum of 200 mm.

The provisions made in this European Technical Assessment are based on an assumed working life of the system Astro X Series CE Pipe Wrap of 10 years, The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

Type X: Intended for use out door and indoor or in conditions exposed to weathering -20 to +70.

Performance Of The Product And References To The Methods Used For Its Assessment

Product Type: Wrap		Intended use: Pipe Closure Device
Basic requirement for construction work	Basic Requirement	Performance
BWR 1 Mechanical resistance and stability		
	None	Not relevant
BWR 2 Safety in case of fire		
EN 1350-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, Health and the Environment		
EN 1026:2000	Air permeability	No performance determined
ETAG 026-3 Annex C	Water permeability	No performance determined
Declaration by manufacturer	Release of dangerous substances	Use category IA1, S/W3 Declaration of manufacturer
BWR 4 Safety in use		
EOTA TR 001:2003	Mechanical resistance and stability	No performance determined
EOTA TR 001:2003	Resistance to impact / movement	No performance determined
EOTA TR 001:2003	Adhesion	No performance determined
BWR 5 Protection against noise		
EN 10140-2/ EN ISO 717-1	Airborne sound insulation	No performance determined
BWR 6 Energy, Economy and Heat Retention		
EN 12664, EN 12667 or EN 12939	Thermal properties	No performance determined
EN ISO 12572 EN 12086	Water vapour permeability	No performance determined

General aspects relating to fitness for use		
EOTA TR 024: 2009	Durability and serviceability	X

Assessment And Verification Of Constancy Of Performance (Hereinafter AVCP) System Applied, With References To Its Legal base

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

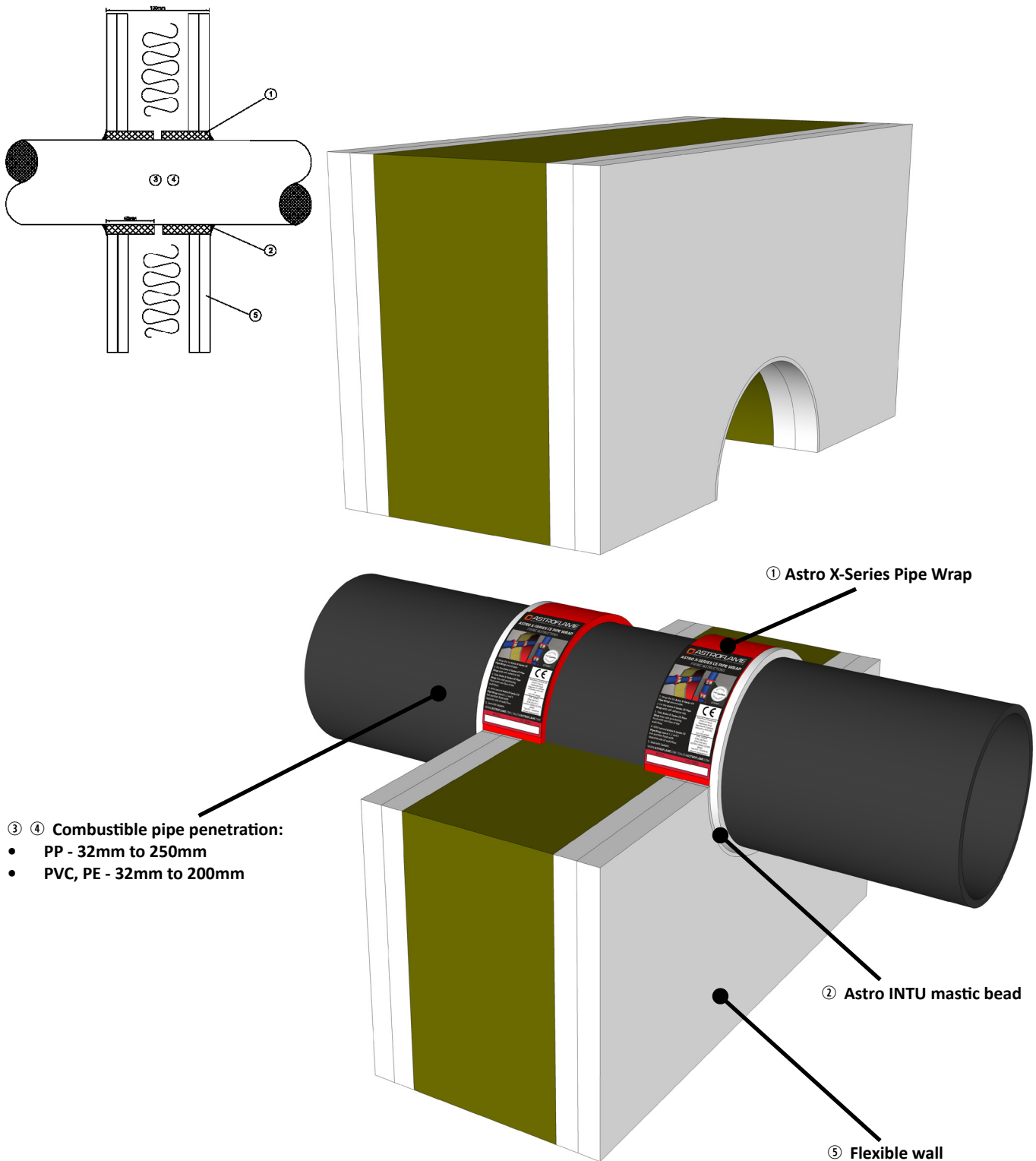
Products	Intended uses	Level or Class	System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	Any	System 1

Technical Details Necessary For The Implementation Of The AVCP System, As Provided For In The Applicable EAD.

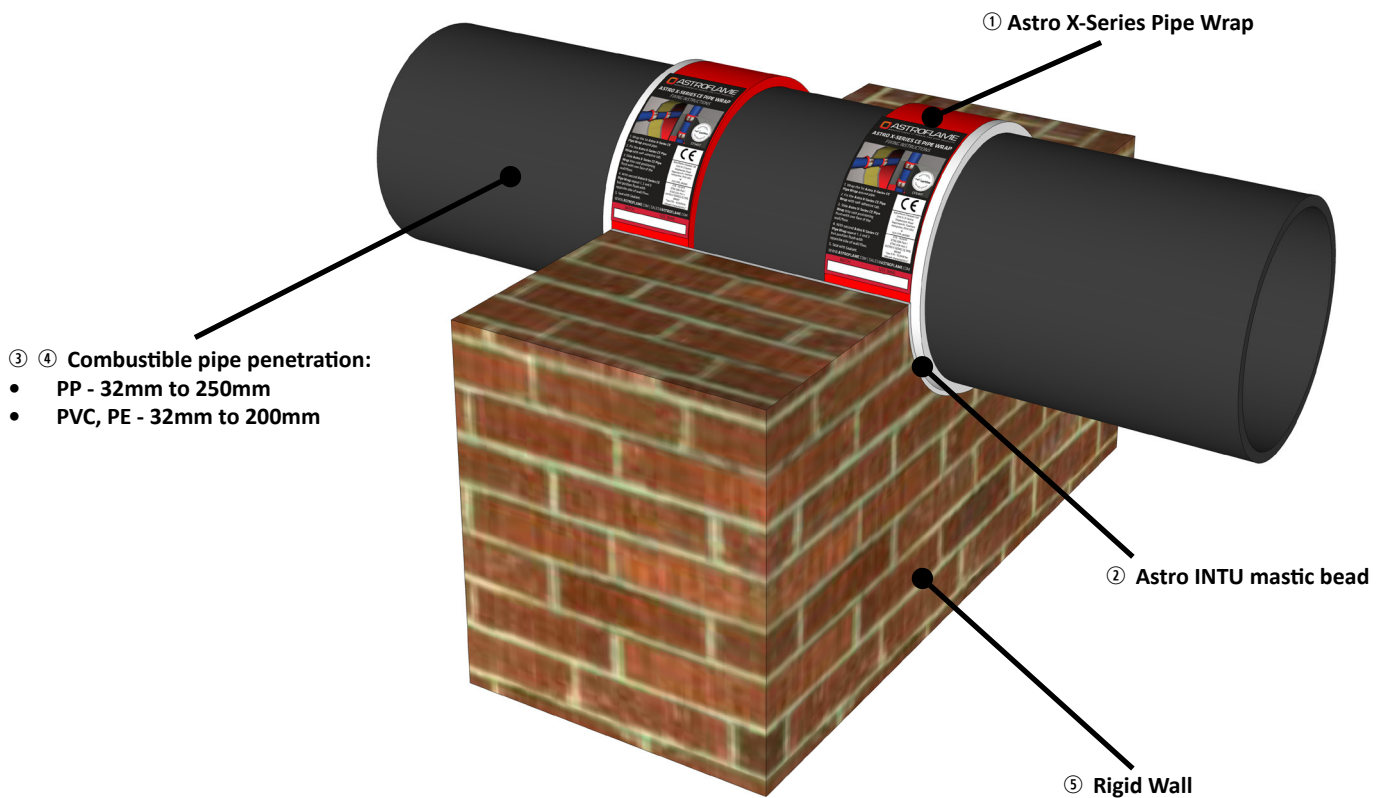
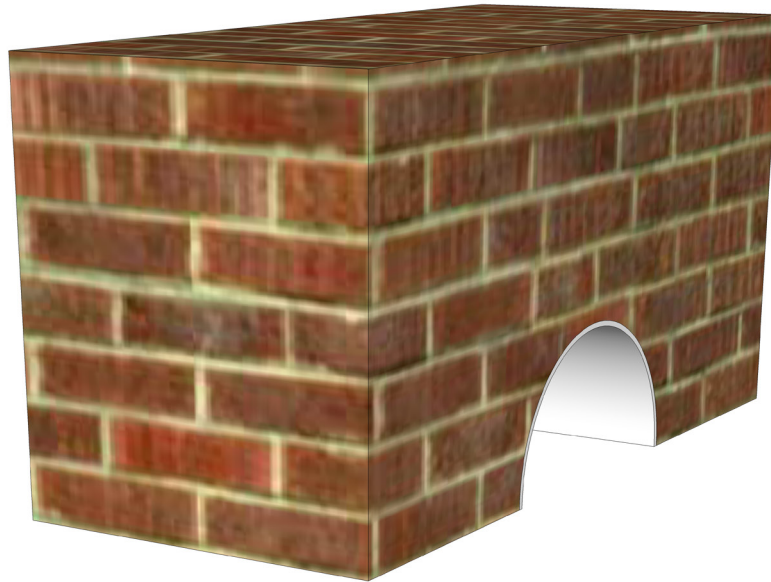
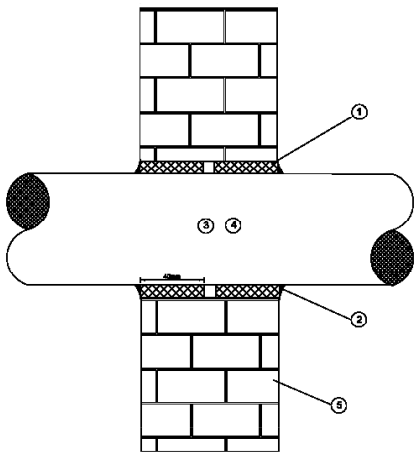
Wall construction with thickness of minimum 100 mm Penetration seal with Astro X Series CE Pipe Wrap fixed to both sides of flexible or rigid wall

Construction details: Combustible pipes fitted with a single Astro X Series CE Pipe Wrap to both sides. Maximum 10 mm annular space filled with Astro Intu Mastic.

ASTRO X-SERIES WRAP EN 1366-3 FOR A FLEXIBLE WALL SYSTEM



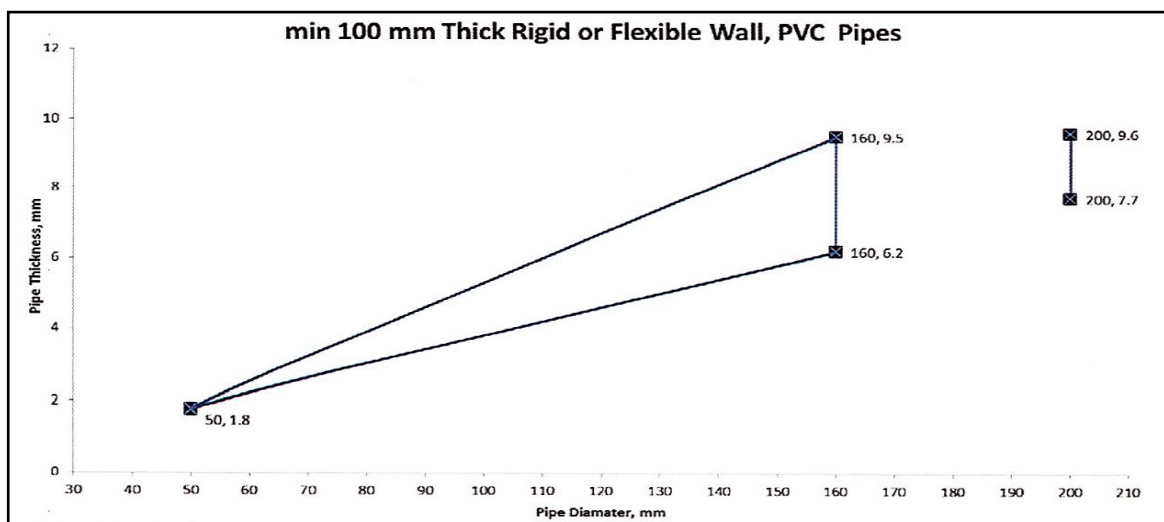
ASTRO X-SERIES WRAP EN 1366-3 FOR A RIGID WALL SYSTEM



PVC-U pipes with Astro X Series CE Pipe Wrap fixed to both sides of flexible or rigid wall

PVC-U pipes according to EN 1452 with Astro X Series CE Pipe Wrap.

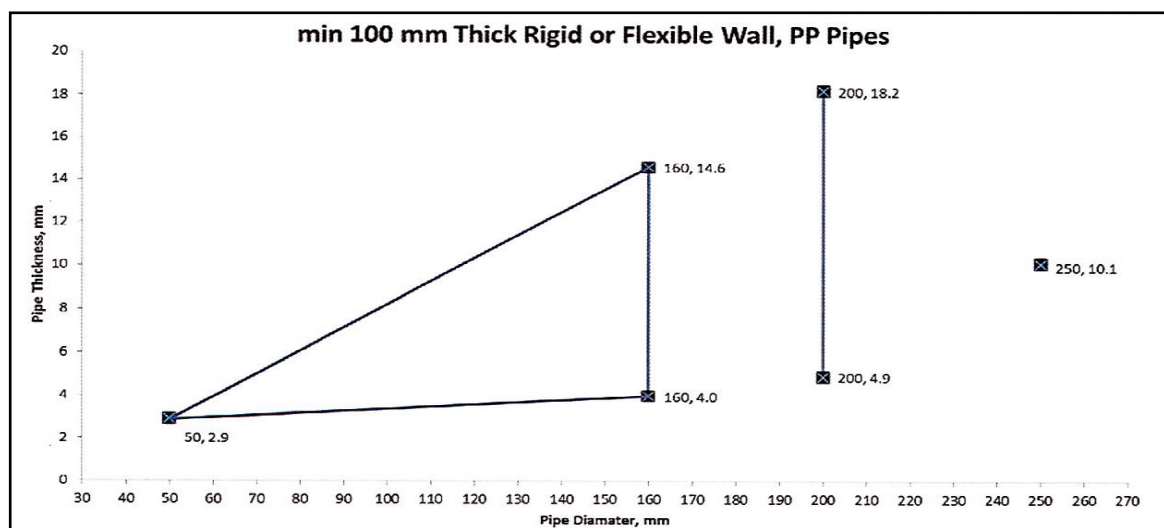
Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Flexible Wall or Rigid (min 100 mm thick) PVC Pipes					
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification	
PVC Pipe 32mm ø 1.8mm wall thickness	32mm	40 mm (W) x 2 mm (T)	4	EI 120 U/C	
PVC Pipe 40mm ø 1.8mm wall thickness	40mm				
PVC Pipe 50mm ø 1.8mm wall thickness	50mm				
PVC Pipe 160 mm ø 6.2mm wall thickness	160mm	40 mm (W) x 8 mm (T)	10	EI 90 U/C	
PVC Pipe 160 mm ø 9.5mm wall thickness	160mm			EI 120 U/C	
PVC Pipe 200 mm ø 7.7mm wall thickness	200mm	40 mm (W) x 10 mm (T)	12		
PVC Pipe 200 mm ø 9.6mm wall thickness	200mm				



PP pipes with Astro X Series CE Pipe Wrap fixed to both sides of flexible or rigid wall

PP pipes according to EN 1451 with Astro X Series CE Pipe Wrap

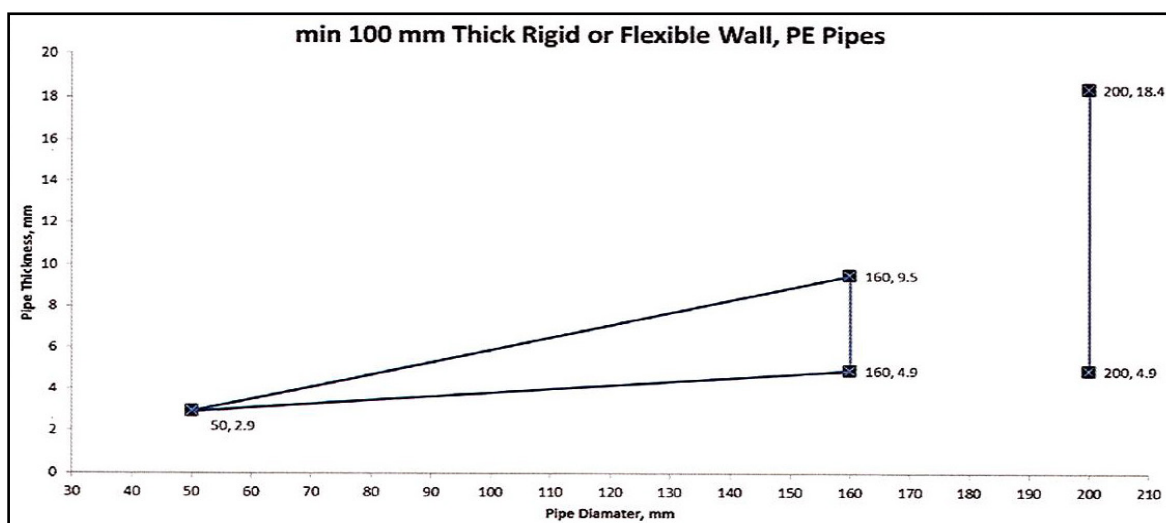
Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Flexible Wall or Rigid (min 100 mm thick) PP Pipes				
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification
PP Pipe 50 mm $\varnothing$ 2.9 mm wall thickness	50 mm Astro X Series CE Pipe Wrap	40 mm (W) x 4 mm (T)	4	EI 120 U/C
PP Pipe 160 mm $\varnothing$ 4.0 mm wall thickness	160 mm Astro X Series CE Pipe Wrap	40 mm (W) x 8 mm (T)	10	E 120 U/C EI 90 U/C
PP Pipe 160 mm $\varnothing$ 14.6 mm wall thickness	160 mm Astro X Series CE Pipe Wrap			EI 120 U/C
PP Pipe 200 mm $\varnothing$ 4.9 mm wall thickness	200 mm Astro X Series CE Pipe Wrap	40 mm (W) x 10 mm (T)	12	E 120 U/C EI 90 U/C
PP Pipe 200 mm $\varnothing$ 18.2 mm wall thickness	200 mm Astro X Series CE Pipe Wrap			EI 120 U/C
PP Pipe 250 mm $\varnothing$ 10.1 mm wall thickness	250 mm Astro X Series CE Pipe Wrap	40 mm (W) x 14 mm (T)	14	E 120 U/C EI 20 U/C



PE pipes with Astro X Series CE Pipe Wrap fixed to both sides of flexible or rigid wall

PE pipes according to DIN 8047/8075 and EN ISO 15494 with Astro X Series CE Pipe Wrap.

Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Flexible Wall or Rigid (min 100 mm thick) PE Pipes				
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification
PE Pipe 50 mm $\varnothing$ 2.9 mm wall thickness	50 mm Astro X Series CE Pipe Wrap	40 mm (W) x 4 mm (T)	4	EI 120 U/C
PE Pipe 160 mm $\varnothing$ 4.9 mm wall thickness	160 mm Astro X Series CE Pipe Wrap	40 mm (W) x 8 mm (T)	10	EI 15 U/C
PE Pipe 160 mm $\varnothing$ 9.5 mm wall thickness	160 mm Astro X Series CE Pipe Wrap			EI 90 U/C
PE Pipe 200 mm $\varnothing$ 4.9 mm wall thickness	200 mm Astro X Series CE Pipe Wrap	40 mm (W) x 10 mm (T)	12	EI 15 U/C
PE Pipe 200 mm $\varnothing$ 18.4 mm wall thickness	200 mm Astro X Series CE Pipe Wrap			EI 120 U/C



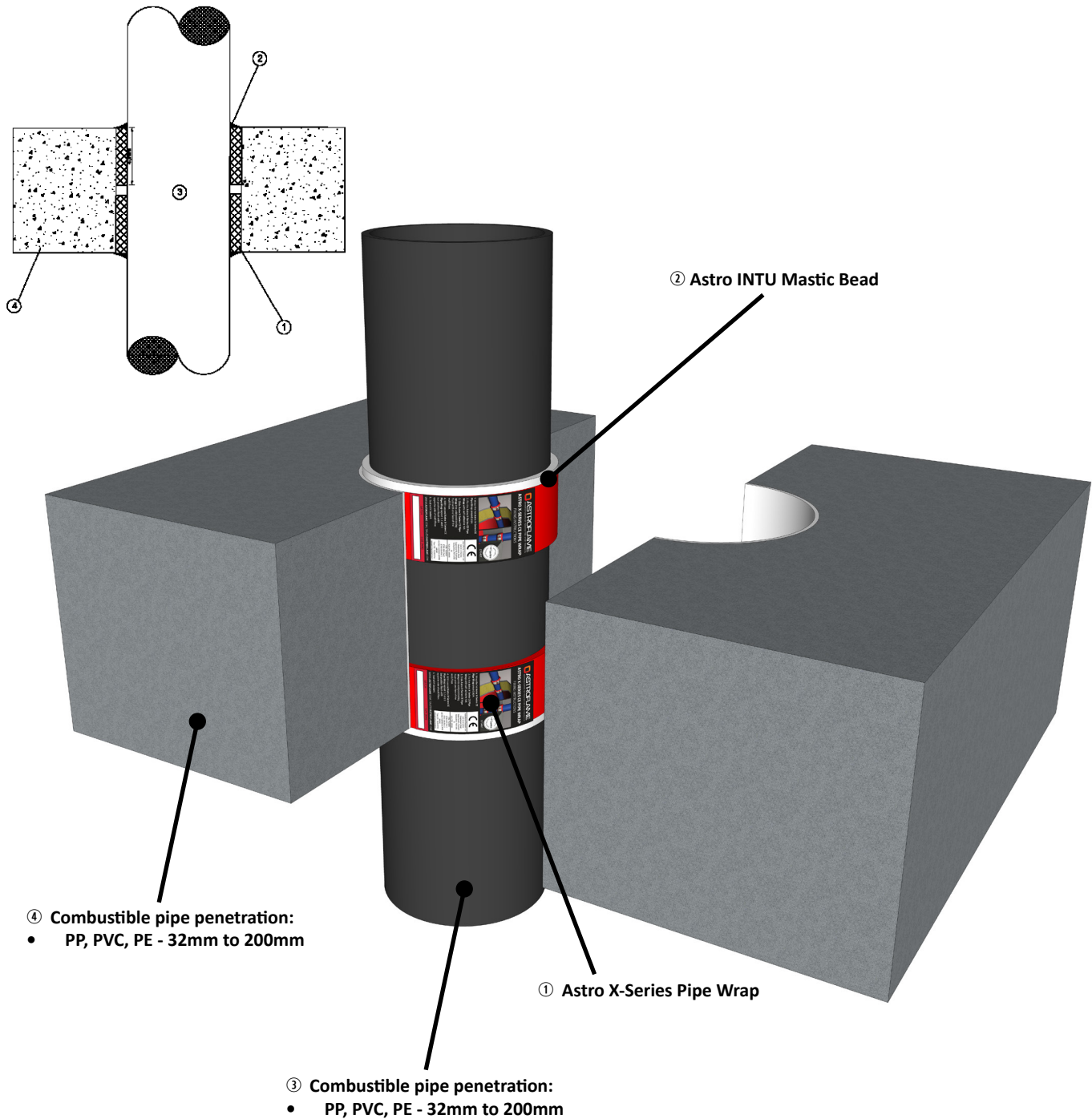
Resistance to Fire Classification of Astro X Series CE Pipe Wrap

Floor construction with thickness of minimum 150 mm

Penetration seal with Astro X Series CE Pipe Wrap fixed to both sides of rigid floor

Construction details: Combustible pipes fitted with a single Astro X Series CE Pipe Wrap to both sides. Maximum 10 mm annular space filled with Astro Intu Mastic.

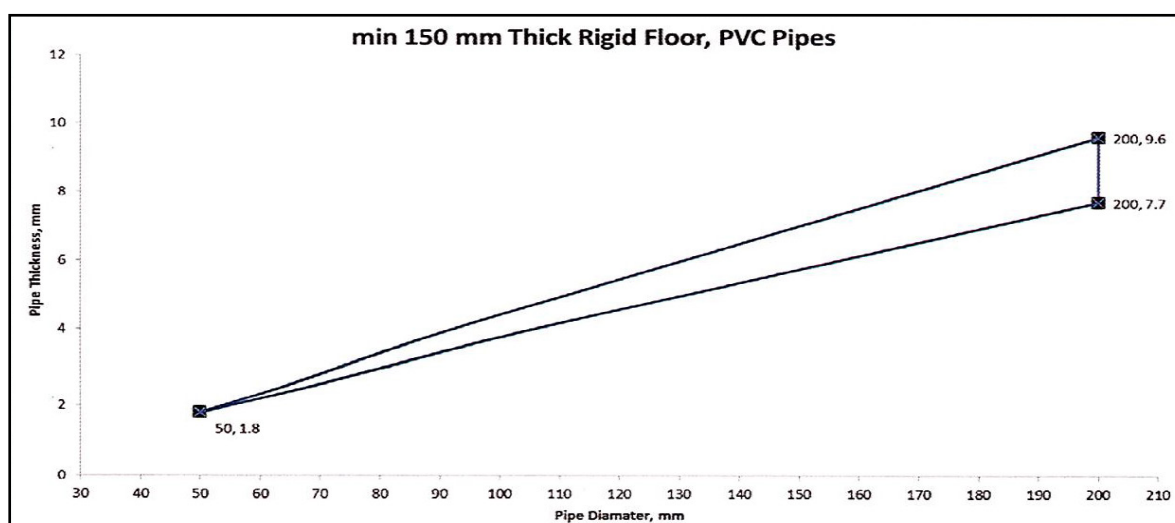
ASTRO X-SERIES WRAP EN 1366-3 FOR A FLOOR SYSTEM



PVC-U pipes with Astro X Series CE Pipe Wrap fixed to both sides of rigid floor

PVC-U pipes according to EN 1452 with Astro X Series CE Pipe Wrap.

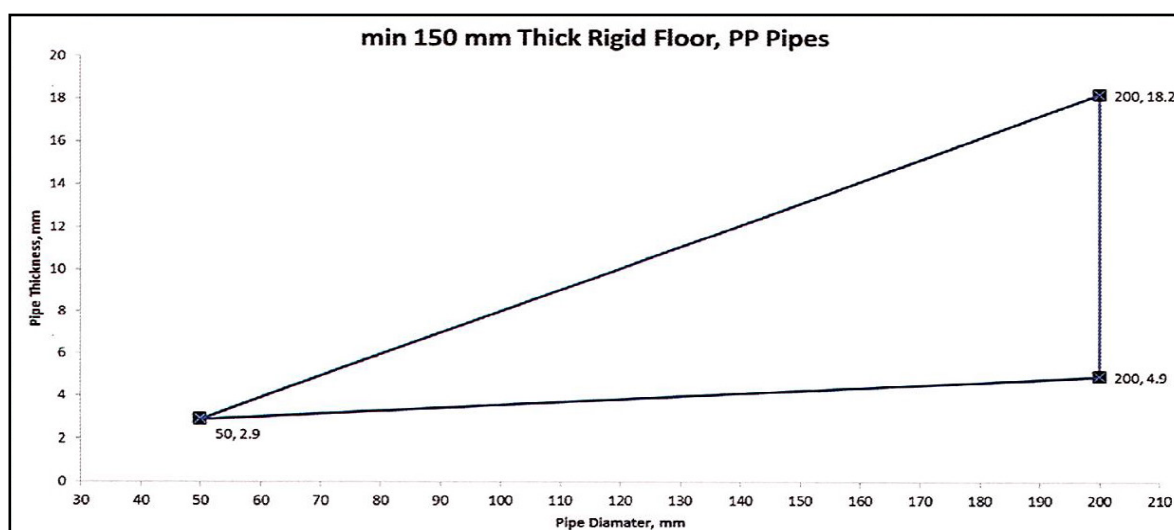
Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) PVC Pipes				
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification
PVC Pipe 50 mm ϕ 1.8 mm wall thickness	50 mm Astro X Series CE Pipe Wrap	1 Layer of 40 mm (W) x 2 mm (T) 1 Layer of 40 mm (W) x 2 mm (T) Combined Thickness 40 mm (W) x 4 mm (T)	4	EI 120 U/C
PVC Pipe 200 mm ϕ 7.7 mm wall thickness	200 mm Astro X Series CE Pipe Wrap	40 mm (W) x 10 mm (T)	12	EI 120 U/C
PVC Pipe 200 mm ϕ 9.6 mm wall thickness	200 mm Astro X Series CE Pipe Wrap			EI 60 U/C



PP pipes with Astro X Series CE Pipe Wrap fixed to both sides of rigid floor

PP pipes according to EN 1451 with Astro X Series CE Pipe Wrap.

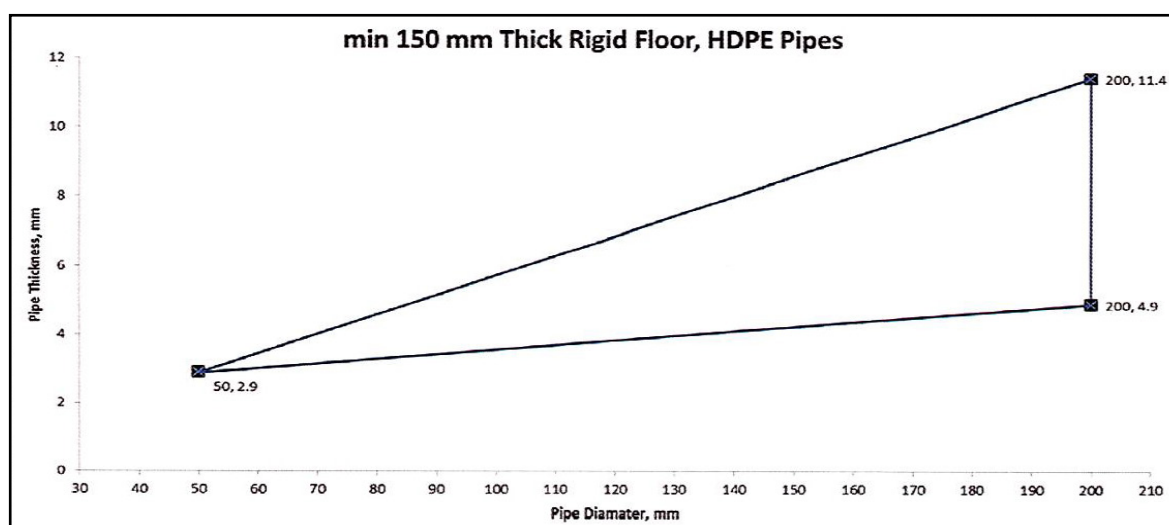
Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) PP Pipes				
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification
PP Pipe 50 mm $\varnothing$ 2.9 mm wall thickness	50 mm Astro X Series CE Pipe Wrap	1 Layer of 40 mm (W) x 2 mm (T) 1 Layer of 40 mm (W) x 2 mm (T) Combined Thickness 40 mm (W) x 4 mm (T)	4	EI 120 U/C
PP Pipe 200 mm $\varnothing$ 4.9 mm wall thickness	200 mm Astro X Series CE Pipe Wrap	40 mm (W) x 10 mm (T)	10	E 20 U/C EI 15 U/C
PP Pipe 200 mm $\varnothing$ 18.2 mm wall thickness	200 mm Astro X Series CE Pipe Wrap			E 120 U/C EI 90 U/C



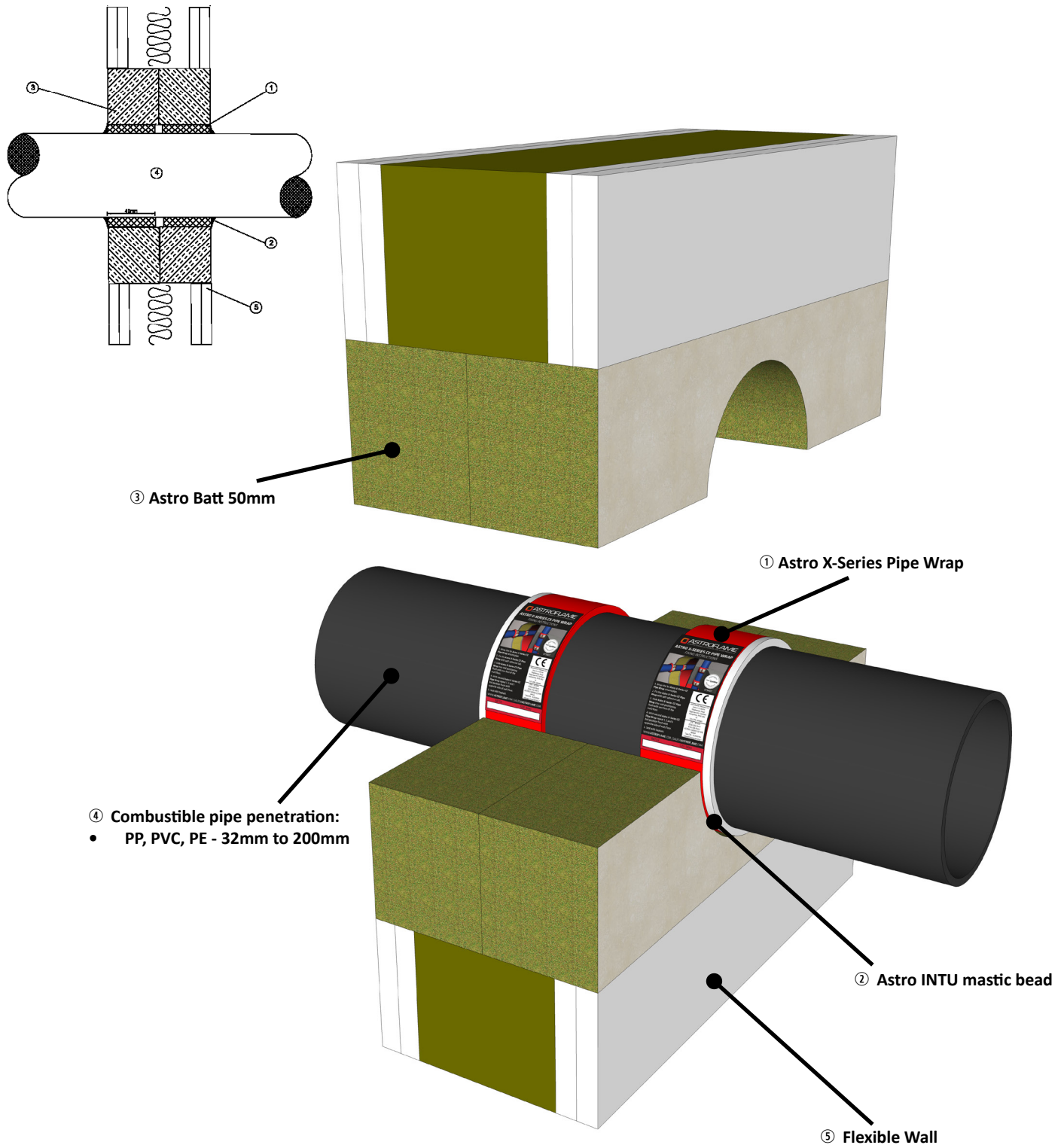
HDPE pipes with Astro X Series CE Pipe Wrap fixed to both sides of rigid floor

HDPE pipes according to DIN 8047/8075 and EN1519 with Astro X Series CE Pipe Wrap.

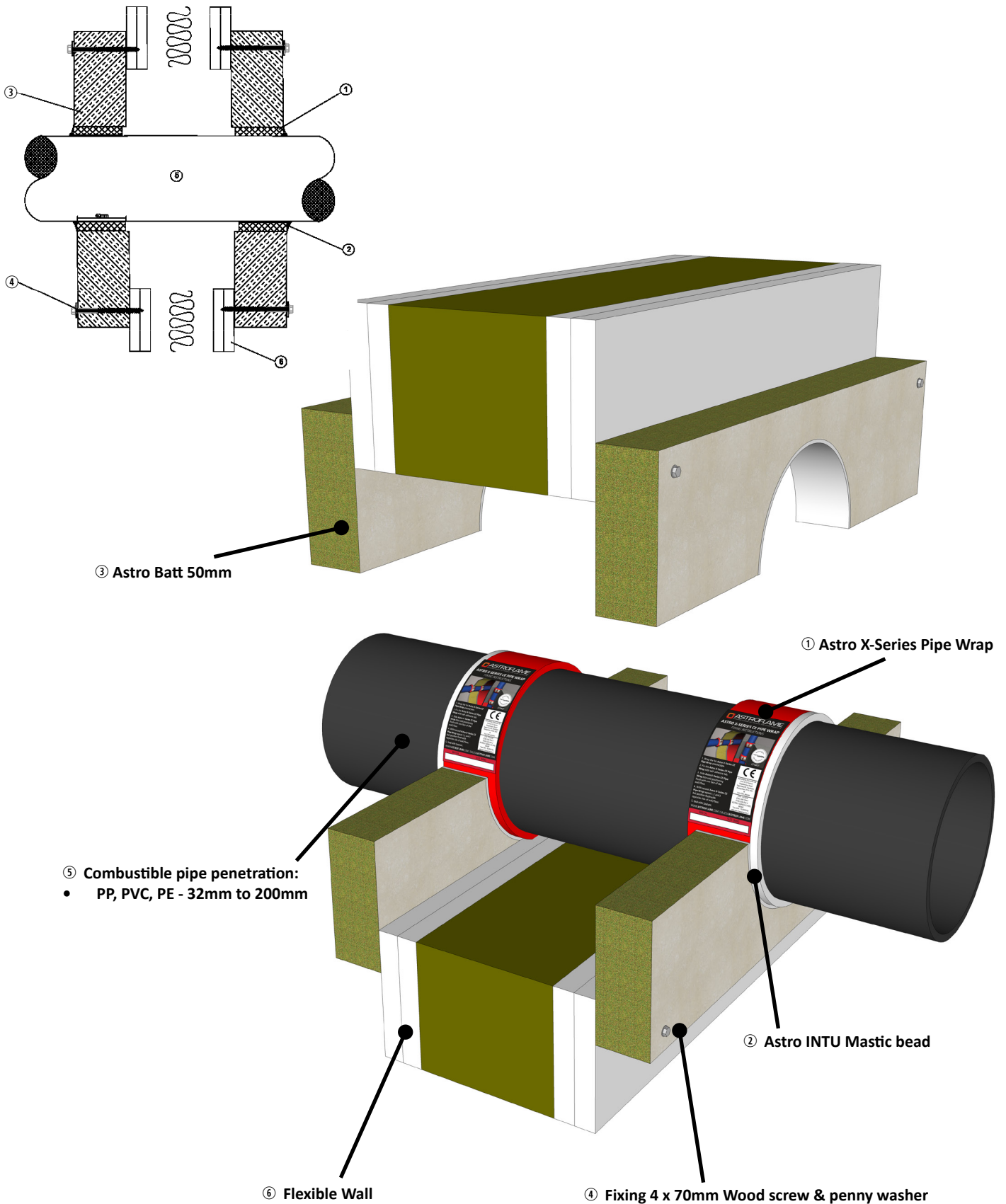
Astro X Series CE Pipe Wrap, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) HDPE Pipes				
Penetration Specification	Wrap Reference	Intumescent Material	Annulus Space (mm)	Classification
HDPE Pipe 50 mm ϕ 2.9 mm wall thickness	50 mm Astro X Series CE Pipe Wrap	1 Layer of 40 mm (W) x 2 mm (T) 1 Layer of 40 mm (W) x 2 mm (T) Combined Thickness 40 mm (W) x 4 mm (T)	4	EI 120 U/C
HDPE Pipe 200 mm ϕ 4.9 mm wall thickness	200 mm Astro X Series CE Pipe Wrap	40 mm (W) x 10 mm (T)	12	EI 120 U/C
HDPE Pipe 200 mm ϕ 11.4 mm wall thickness	200 mm Astro X Series CE Pipe Wrap			EI 120 U/C



ASTRO X-SERIES WRAP EN 1366-3 IN A ASTRO BATT FOR A FLEXIBLE WALL SYSTEM



ASTRO X-SERIES WRAP EN 1366-3 IN A ASTRO BATT PATRESS FOR A FLEXIBLE WALL SYSTEM





This approval relates to the use of Astro X Series CE Pipe Wrap for the fire protection where services are penetrating walls. The detailed scope is given in the Approval Matrix included in this Certificate. This shows the thickness and acceptable services for Astro X Series CE Pipe Wrap required to provide fire resistance periods in accordance with BS EN 1366-3: 2009 of up to 120 minutes for differing services and substrate constructions. The scope of certification complies with the guidelines stated in the ASFP Red Book: 3rd Edition for 3rd party certification schemes.

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.'

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

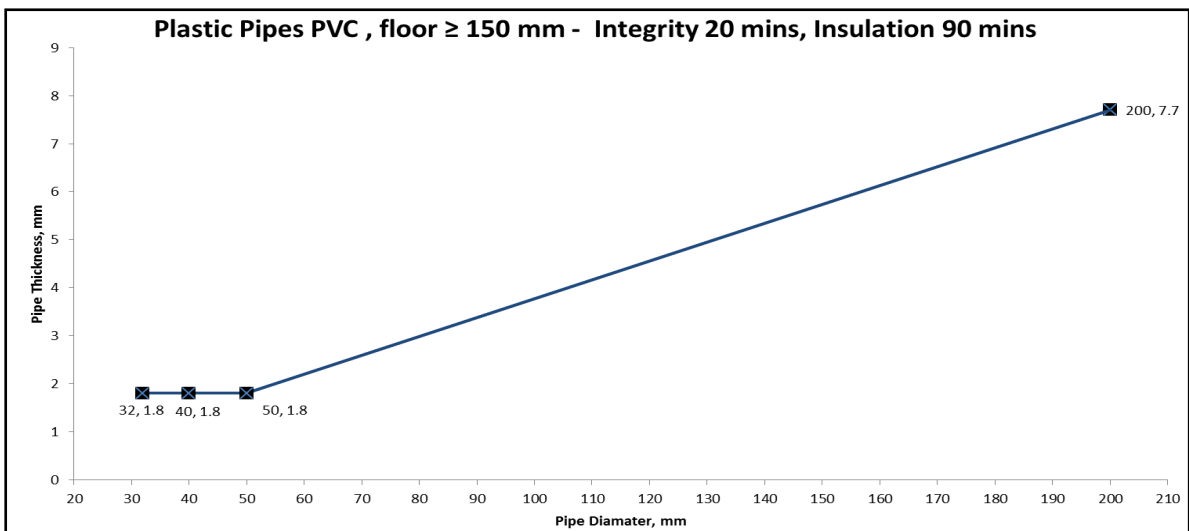
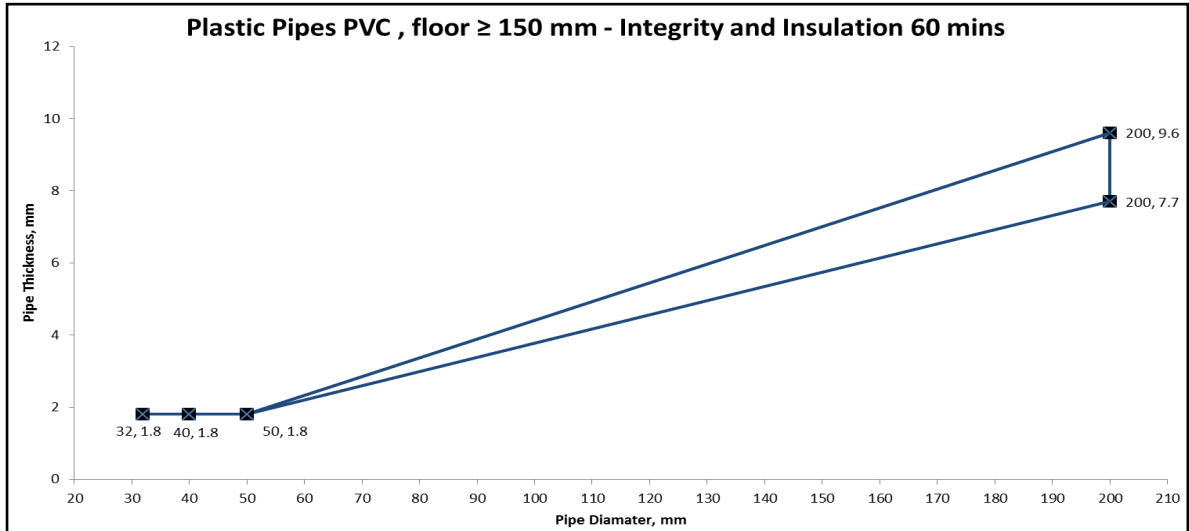
The walls shall be at least 100 mm thick and have at least the same fire rating as that required for the penetration seal. The floors shall be at least 150 mm thick and have at least the same fire rating as that required for the penetration seal

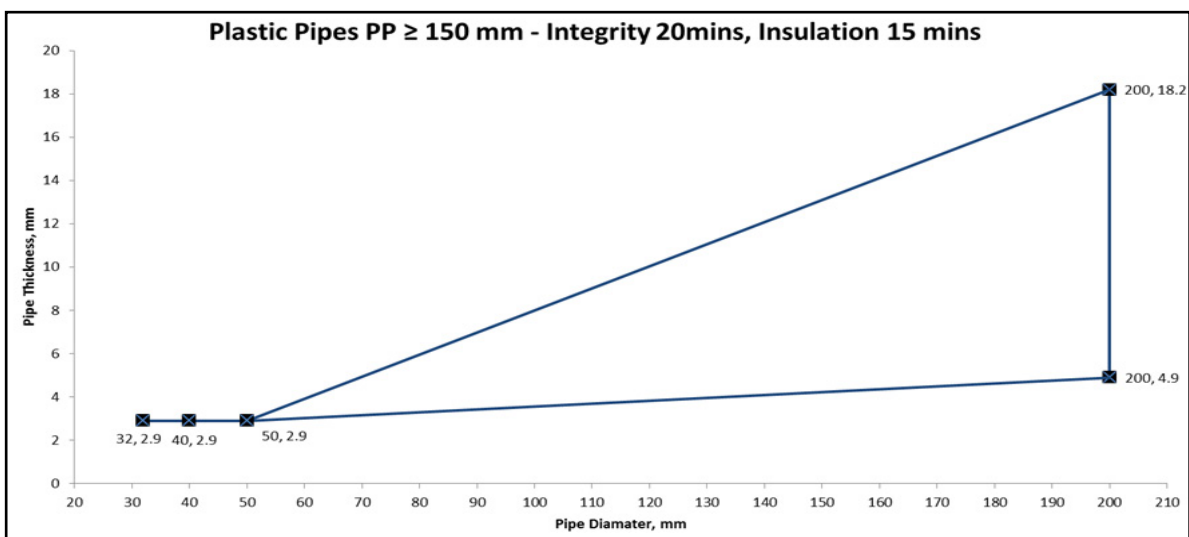
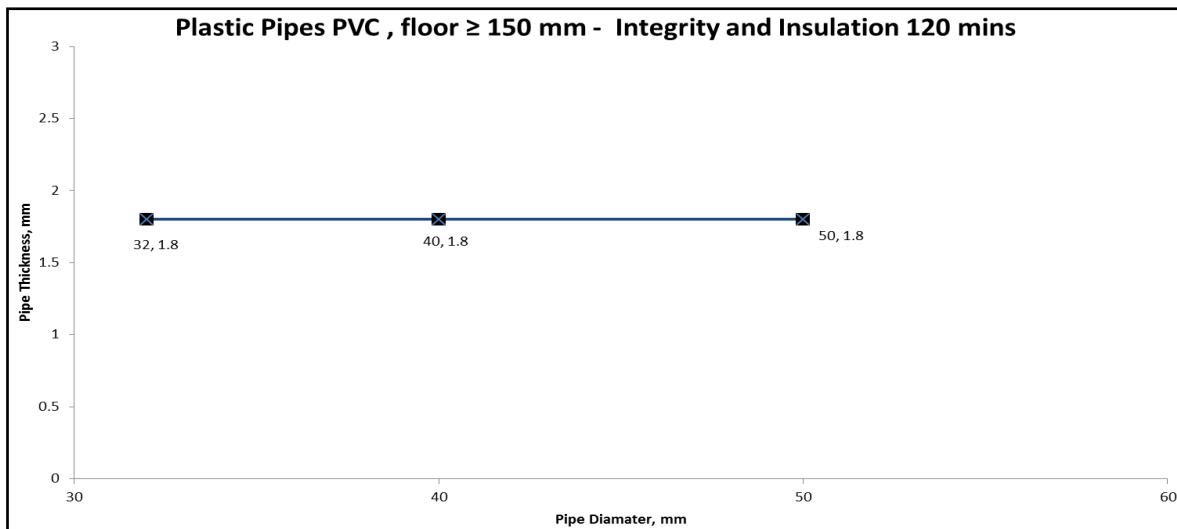
The services which may be fitted through the seals are PVC, ABS, PP and HDPE pipes of various sizes, as detailed within the Approval Matrix included in this Certificate.

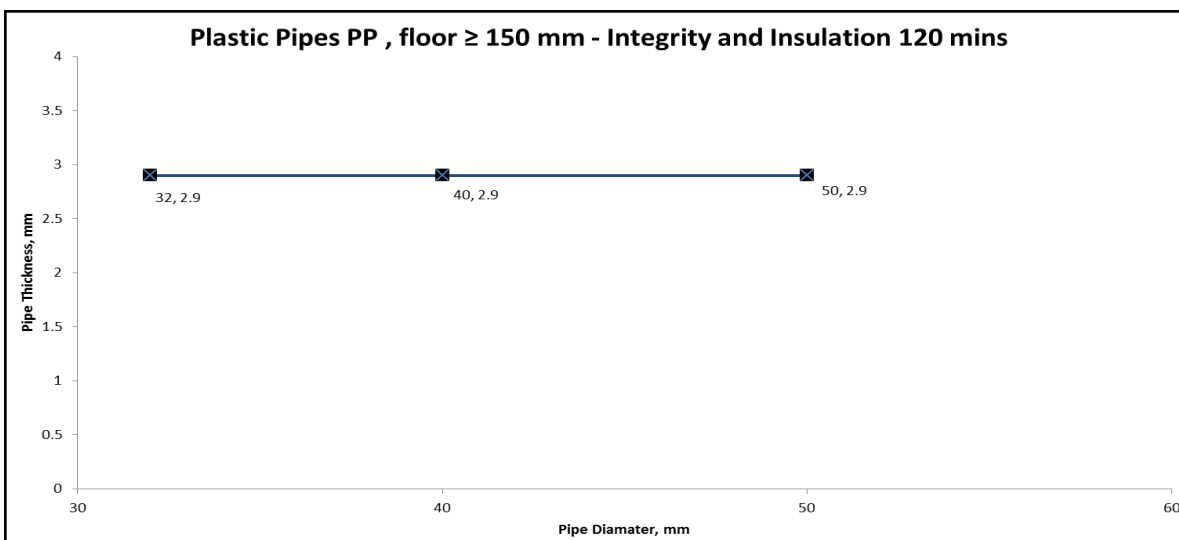
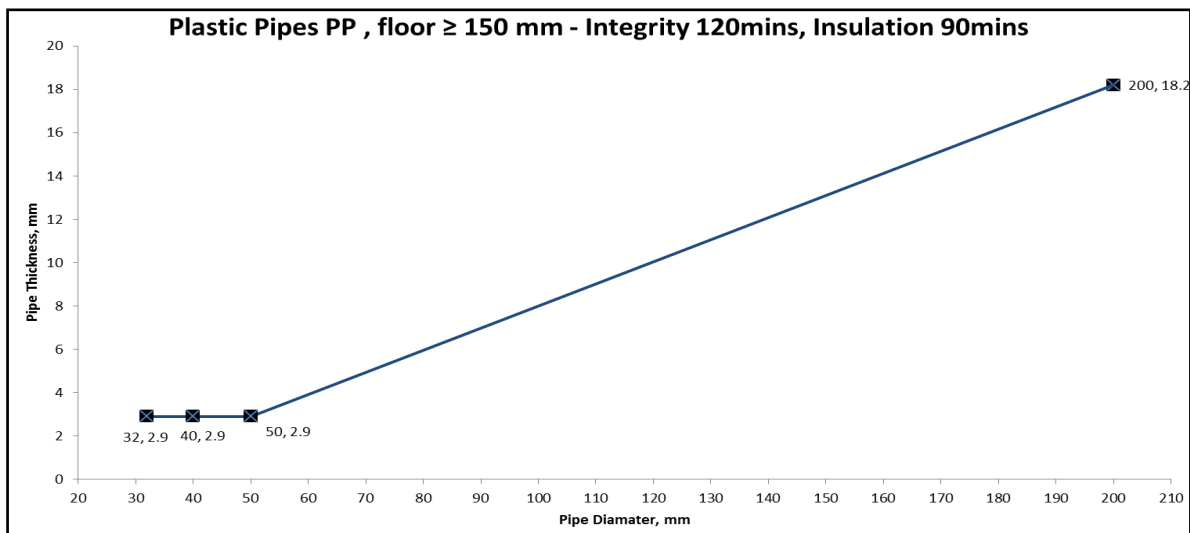
Astro X Series CE Pipe Wrap- Approval Matrix Floors 150mm min.

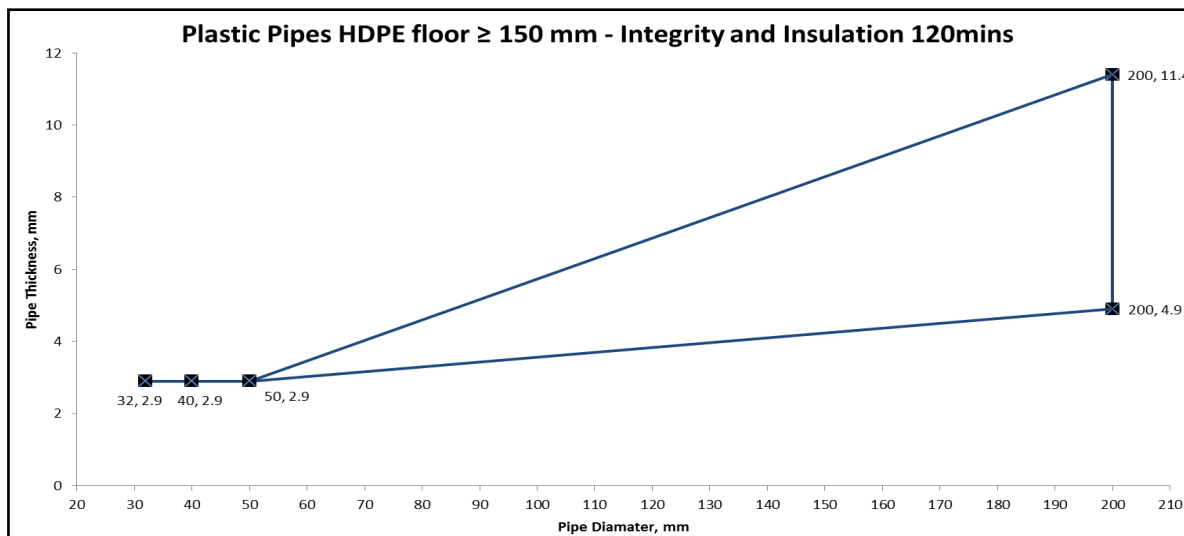
Product Name		Astro X Series CE Pipe Wrap Installed Both Sides of 150mm thick Rigid Floor	
Maximum Annulus:	12mm filled with min 5mm deep Astro Intu Mastic		
Floors:	The floors shall be a minimum of 150 mm thick. All concrete floors shall have at least the same fire rating as that required of the Astro X Series CE pipe wrap.		
Application Technique:	The Astro X Series CE Pipe Wrap is folded around the pipe and inserted into the annular space between the pipe and floor.		
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 400 mm from the upper surface of the seal.		
Resistance to Smoke:	Not evaluated by this approval	Weather Capability:	Not evaluated by this approval
Acoustic Rating:	Not evaluated by this approval	Movement Capability:	Not evaluated by this approval

Intumescent Thickness	
Pipe Diameter	Wrap Size / Number
ø 32 mm - ø 50 mm	2 off 40 mm (W) x 2 mm (T)
ø 51 mm - ø 105 mm	3 off 40 mm (W) x 2 mm (T)
ø 106 mm - ø 160 mm	4 off 40 mm (W) x 2 mm (T)
ø 161 mm - ø 200 mm	5 off 40 mm (W) x 2 mm (T)
ø 201 mm - ø 250 mm	6 off 40 mm (W) x 2 mm (T)





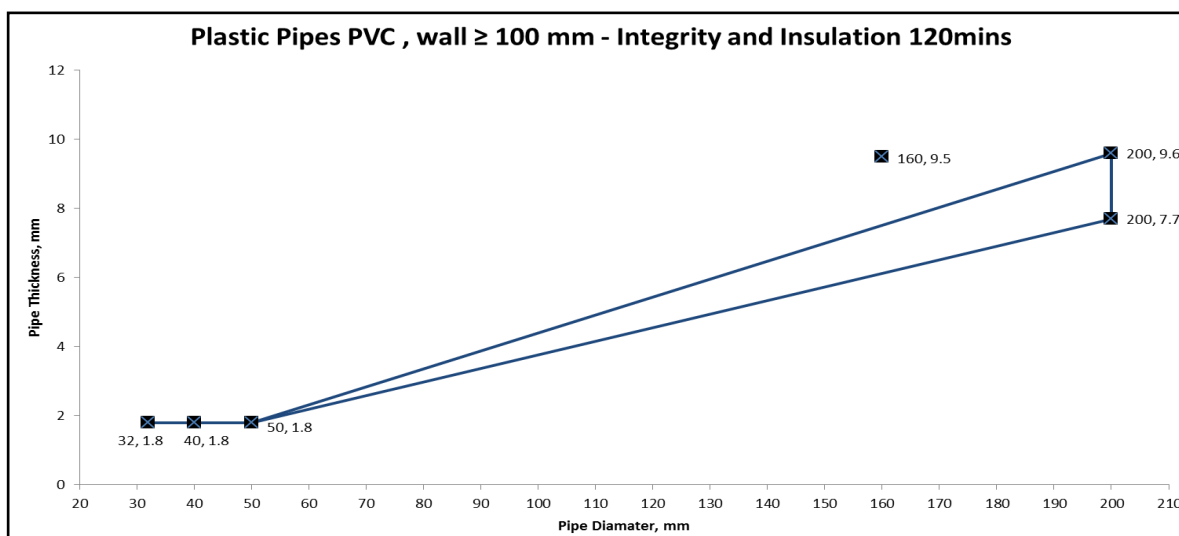
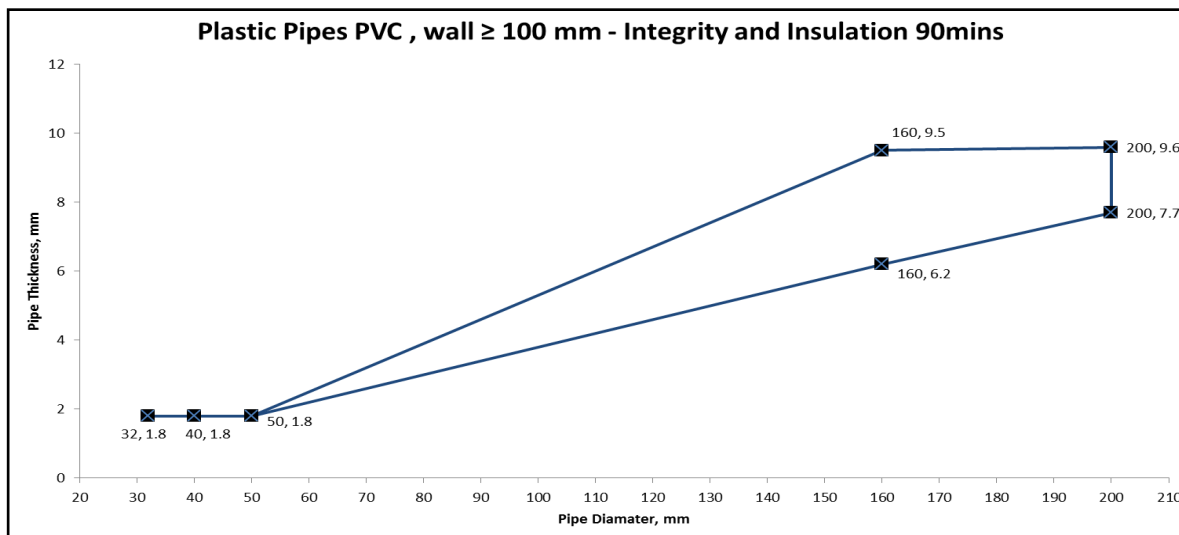


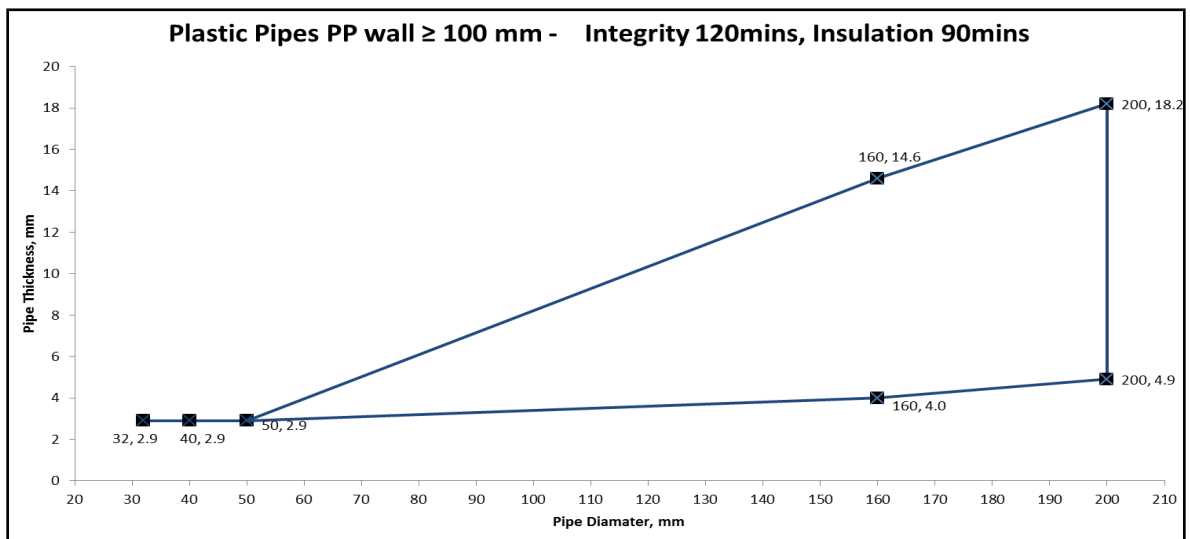
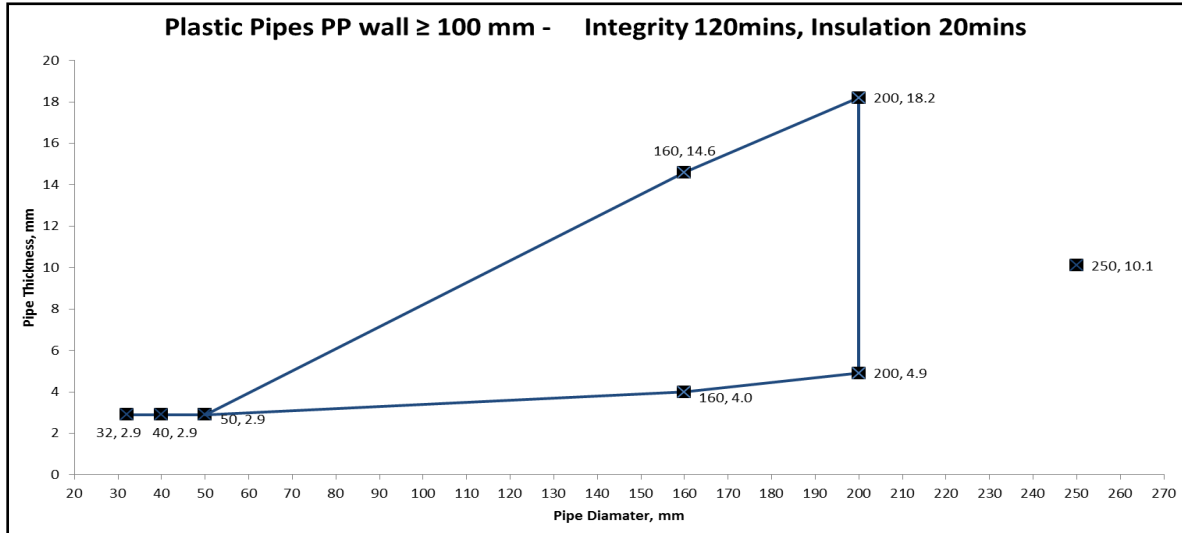


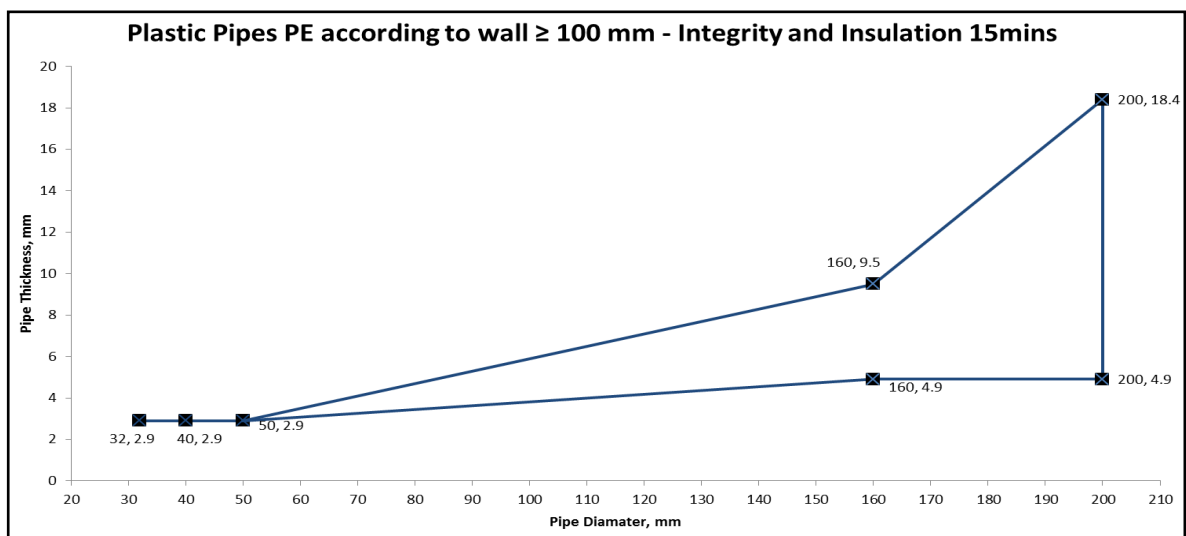
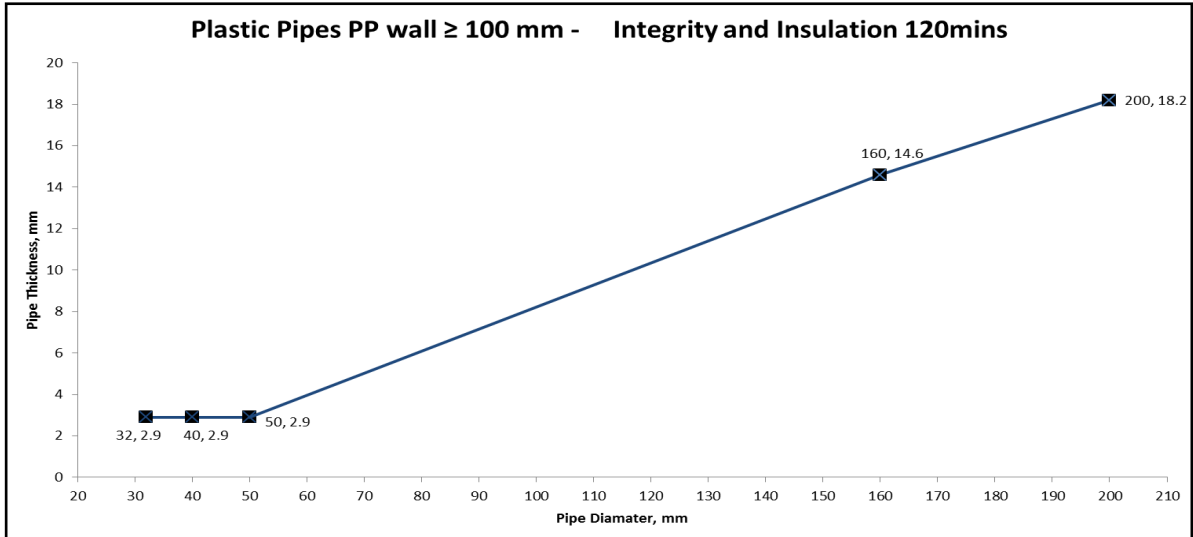
Astro X Series CE Pipe Wrap- Approval Matrix Walls 100mm min.

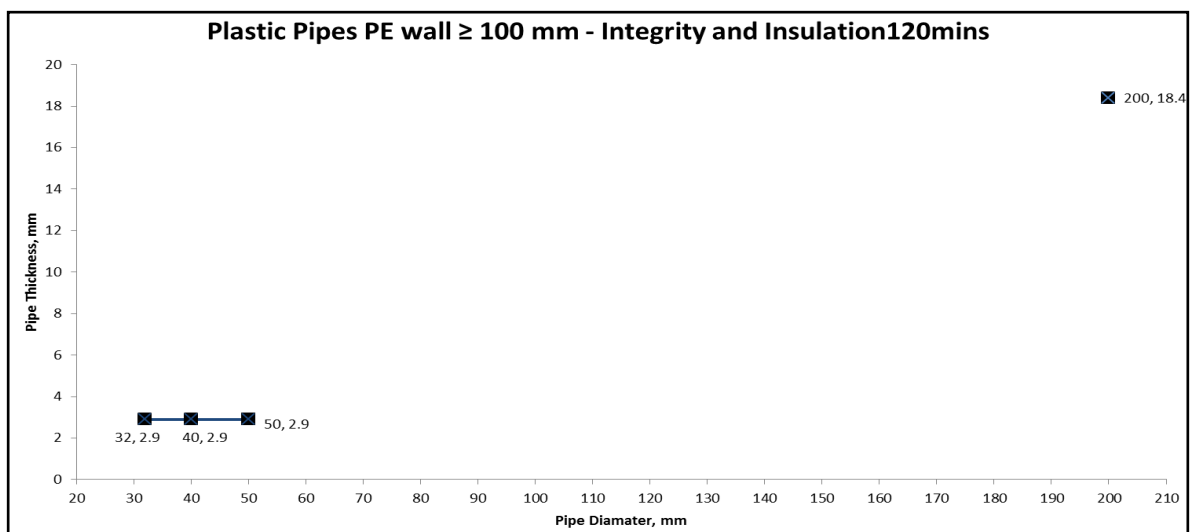
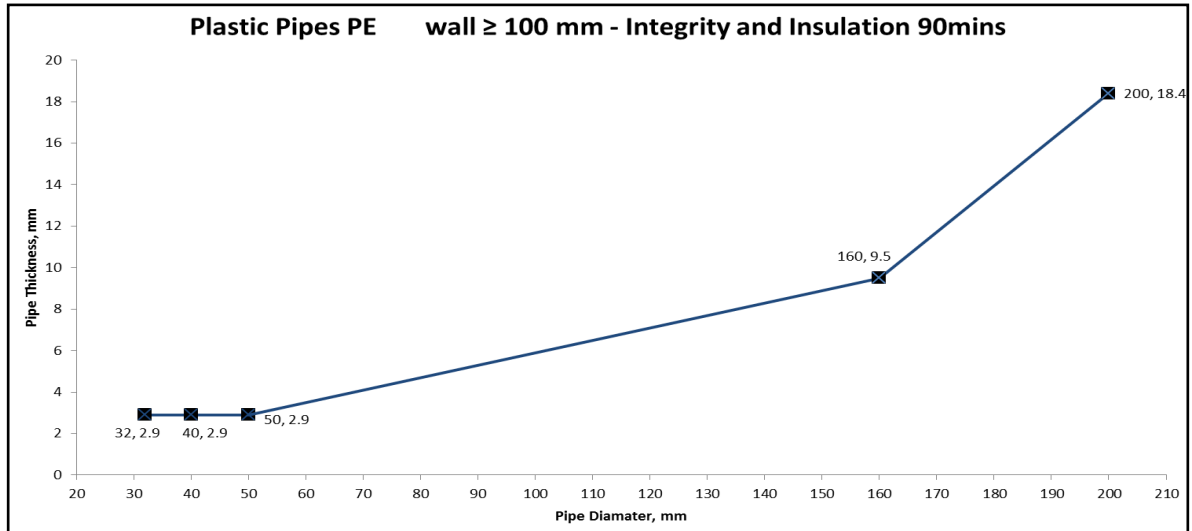
Product Name		Astro X Series CE Pipe Wrap Installed Both Sides of 100mm thick rigid or flexible wall	
Maximum Annulus:	12mm filled with min 20mm deep Astro Intu Mastic		
Floors:	The walls shall be a minimum of 100 mm thick. All concrete or plasterboard shall have at least the same fire rating as that required of the pipe collar.		
Application Technique:	The Astro X Series CE Pipe Wrap is folded around the pipe the required number of times and inserted into the annular space between the pipe and wall.		
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 400 mm from both faces of the seal.		
Resistance to Smoke:	Not evaluated by this approval	Weather Capability:	Not evaluated by this approval
Acoustic Rating:	Not evaluated by this approval	Movement Capability:	Not evaluated by this approval

Intumescent Thickness	
Pipe Diameter	Wrap Size / Number
ø 32 mm - ø 50 mm	2 off 40 mm (W) x 2 mm (T)
ø 51 mm - ø 105 mm	3 off 40 mm (W) x 2 mm (T)
ø 106 mm - ø 160 mm	4 off 40 mm (W) x 2 mm (T)
ø 161 mm - ø 200 mm	5 off 40 mm (W) x 2 mm (T)
ø 201 mm - ø 250 mm	6 off 40 mm (W) x 2 mm (T)









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