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United Kingdom

appointed according to Article 29 of Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment

0843-UKTA-24/0045 of 30/09/2024

Technical Assessment Body Issuing the UKTA:	UL International (UK) Ltd
Trade name of the construction product	Astro X Series CE Pipe Wrap UL
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products – Penetration Seals
Manufacturer	Astroflame Fireseals Ltd Unit 8, The I.O. Centre Stephenson Road Segensworth Fareham Hampshire PO15 5RU
Manufacturing plant(s)	A/008
This UK Technical Assessment contains	22 pages including 1 Annex which forms an integral part of this assessment.
This UK Technical Assessment* is issued, on the basis of	EAD 350454-00-1104, September 2017

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*** in accordance with Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020**

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I. SPECIFIC PARTS OF THE UK TECHNICAL ASSESSMENT

1 Technical description of the product

1) Astro X Series CE Pipe Wrap UL is installed 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.

2) Astro X Series CE Pipe Wrap UL is installed around the pipe at the soffit and upper face of floors and both faces of walls, depending on application and by applying a number of passes to reach the required thickness. Fixing specifications and number of passes are detailed in Annex A.

3) Astro X Series CE Pipe Wrap UL can be used with Astro Intu Mastic to seal the space between the combustible pipe and the aperture to close gap sizes as specified in Annex A.

2 Specification of the intended uses of the product in accordance with the applicable UK Assessment Document (Pre-Exit European Assessment Document): EAD 350454-00-1104: 2017

Detailed information and data is given in Annex A.

1) The intended use of Astro X Series CE Pipe Wrap UL 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 Astro X Series CE Pipe Wrap UL 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/m^3.
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/m^3.

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

3) The system Astro X Series CE Pipe Wrap UL may be used to provide a penetration seal with specific combustible pipes, single only (for details see Annex A).

4) Apertures in the separating element shall be maximum oversize with respect to the pipe diameter according to the tables listed in Annex A. The remaining annular space/gap shall be infilled with Astro Intu Mastic. Apertures for the penetration of pipes shall be separated by a minimum of 200 mm.

5) The provisions made in this UK Technical Assessment are based on an assumed working life of the Astro X Series CE Pipe Wrap UL 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.

6) Services in walls shall be supported at maximum 400mm from the face of the separating element for walls, and 400mm above the surface of the floor.

7) Use categroy: Type X: Intended for use in conditions exposed to weathering.

3 Performance of the product and references to the methods used for its assessment

Product-type: Pipe Wrap		Intended use: Penetration Seal
Basic requirement for construction work	Basic Requirement	Basic requirement for construction work
BWR 1 Mechanical resistance and stability		
-	None	-
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
EN 1026:2000	Air permeability (material property)	No performance determined
EAD 350454-00-1104, Annex C	Water permeability (material property)	No performance determined
Declaration of manufacturer	Release of dangerous substances	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 ISO 11600	Adhesion	No performance determined
BWR 5 Protection against noise		
EN 10140-2/ EN ISO 717-1	Airborne sound insulation	No performance determined
EN 10140-3/ EN ISO 717-2	Impact 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		
ISO 8339: 2005, ISO 9046: 2004 & ISO 7389: 2003	Durability and serviceability	Type X
BWR 7 Sustainable use of natural resources		
-	-	No performance determined

4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE

According to the Statutory Instrument 2019 No. 465 – made 5th March 2019 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and coming into force on exit day and Statutory Instrument 2020 No. 1359 – made 26th November 2020 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and coming into force immediately before the 2019 Regulations come into force, on the procedure for attesting the conformity of construction products as regards fire stopping, fire sealing and fire protective products, published as 'Pre-Exit' European Assessment Documents, (see https://www.gov.uk/guidance/pre-exit-european-assessment-documents-construction-products), the system of assessment and verification of constancy of performance (see Annex V to Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020) given in the following table(s) apply.

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Tasks of the manufacturer:

Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this UK Technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this UK Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 18/10/2022 relating to the UK Technical Assessment 0843-UKTA-24/0045 issued on 30/09/2024 which is part of the technical documentation of this UK Technical Assessment. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

Other tasks of the manufacturer

Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:

(a) Technical data sheet:

- Field of application:
- Building elements for which the penetration seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the penetration seal
- Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. pipe trays)

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

6 Issued on:

30th September 2024

Report by:



P. Foster
Project Engineer Associate
Built Environment

Reviewed by:



C. Johnson
Senior Staff Engineer
Built Environment

For and on behalf of UL International (UK) Ltd.

ANNEX A – Resistance to Fire Classification – Astro X Series CE Pipe Wrap UL

A.1 Intumescent Thickness

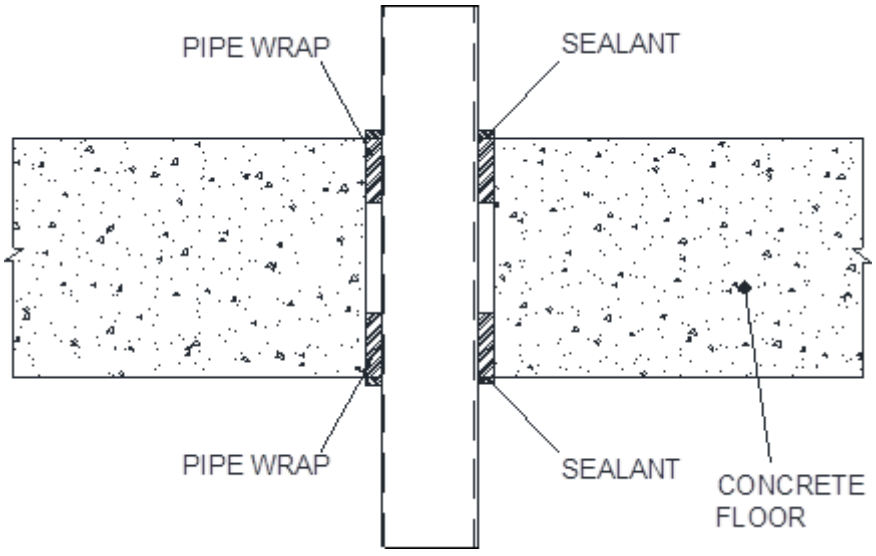
The permitted thickness of the intumescent material for various ranges of pipe diameters:

Intumescent Thickness	
Pipe Diameter	**Intumescent Material**
ø 32 mm - ø 50 mm	1 off 40 mm (W) x 2 (T)
ø 51 mm - ø 82 mm	2 off 40 mm (W) x 2 (T)
ø 83 mm - ø 115 mm	3 off 40 mm (W) x 2 (T)
ø 116 mm - ø 160 mm	4 off 40 mm (W) x 2 (T)
ø 161 mm - ø 200 mm	5 off 40 mm (W) x 2 (T)
ø 201 mm - ø 250 mm	6 off 40 mm (W) x 2 (T)

A.2 Floor construction with thickness of minimum 150 mm

A.2.1 Penetration seal with Astro X Series CE Pipe Wrap UL installed within both sides of rigid floor

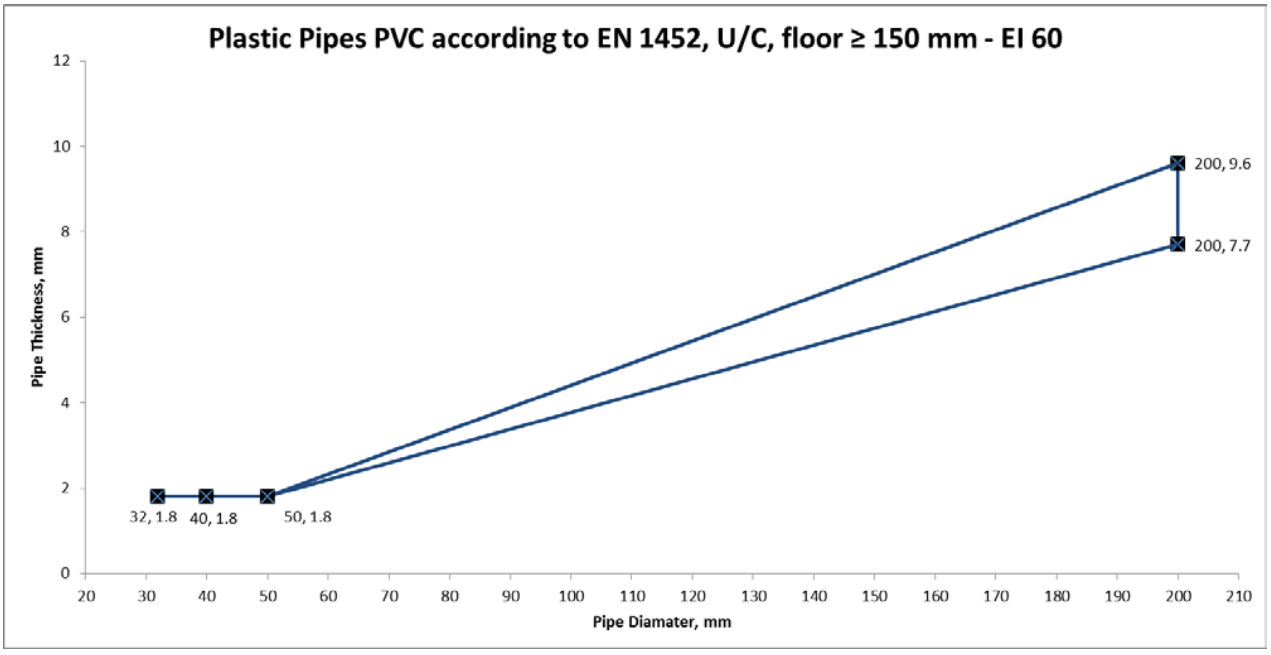
Construction details: Combustible pipes installed with a single Astro X Series CE Pipe Wrap UL within both sides. Maximum annular space according to the tables listed in A.2.1.1 to A.2.1.3 filled with Astro Intu Mastic.

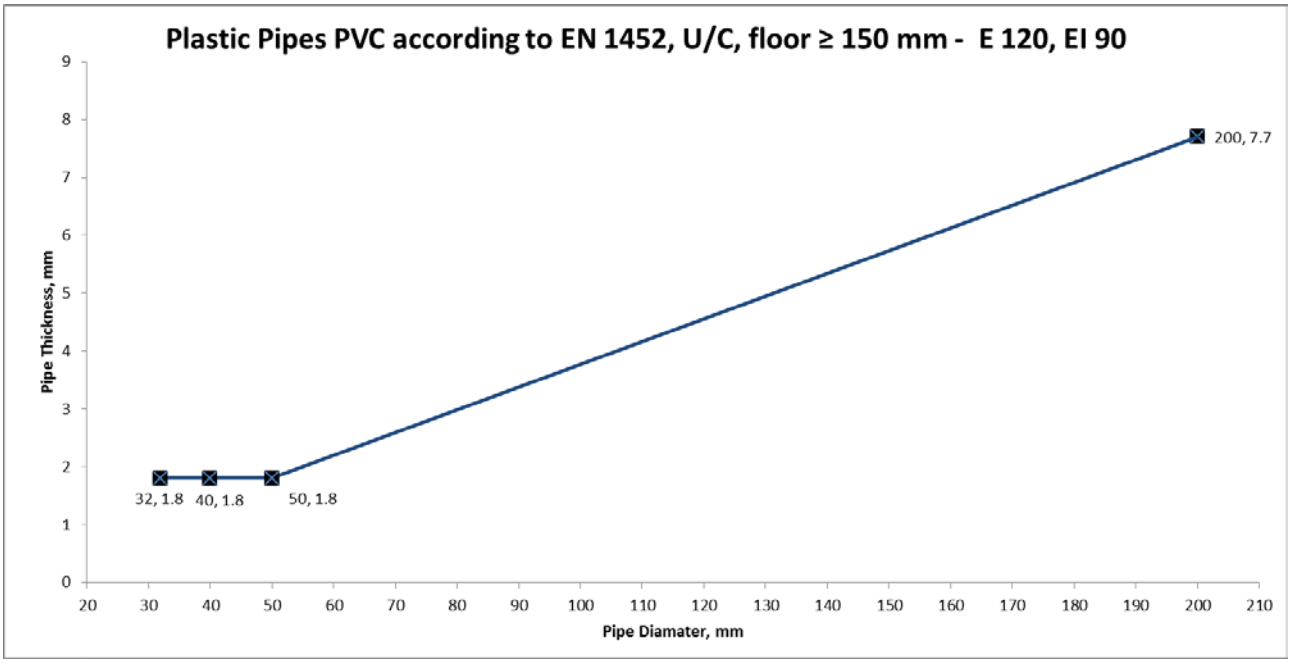


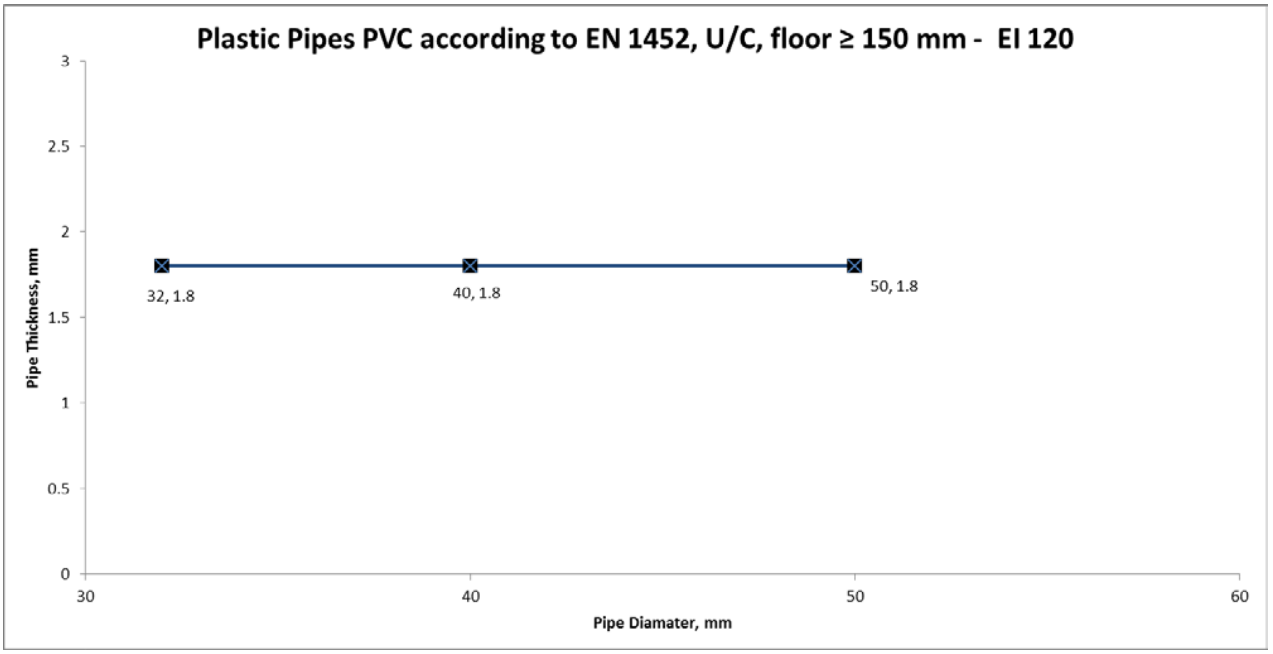
A.2.1.1 PVC-U pipes with Astro X Series CE Pipe Wrap UL installed within both sides of rigid floor

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

Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) PVC Pipes			
Penetration Specification	**Wrap Size / Number**	**Annulus Space (mm)**	**Classification**
PVC Pipe 32 mm ø 1.8 mm wall thickness	1 off 40 mm (W) x 2 mm (T)	4	**EI 120 U/C**
PVC Pipe 40 mm ø 1.8 mm wall thickness			
PVC Pipe 50 mm ø 1.8 mm wall thickness			
PVC Pipe 200 mm ø 7.7 mm wall thickness	5 off 40 mm (W) x 2 mm (T)	12	**E 120 U/C** **EI 90 U/C**
PVC Pipe 200 mm ø 9.6 mm wall thickness			**EI 60 U/C**



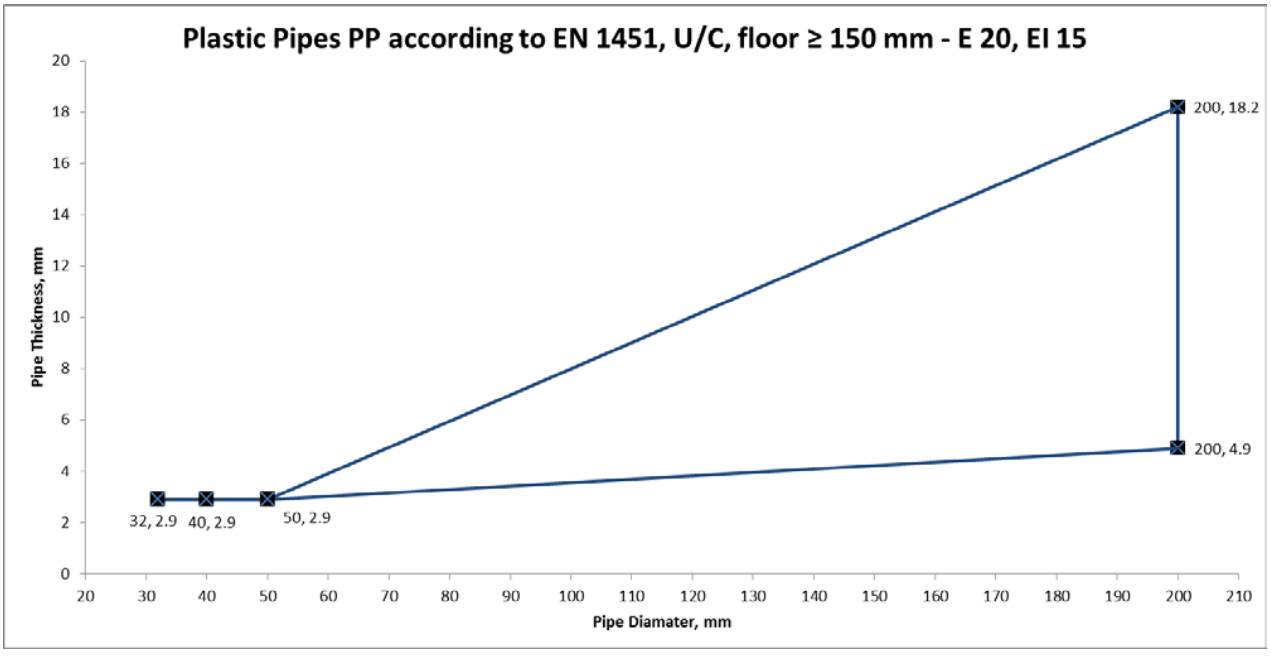

Plastic Pipes PVC according to EN 1452, U/C, floor ≥ 150 mm - E 120, EI 90
Pipe Thickness, mm
Pipe Diamater, mm
32, 1.8
40, 1.8
50, 1.8
200, 7.7

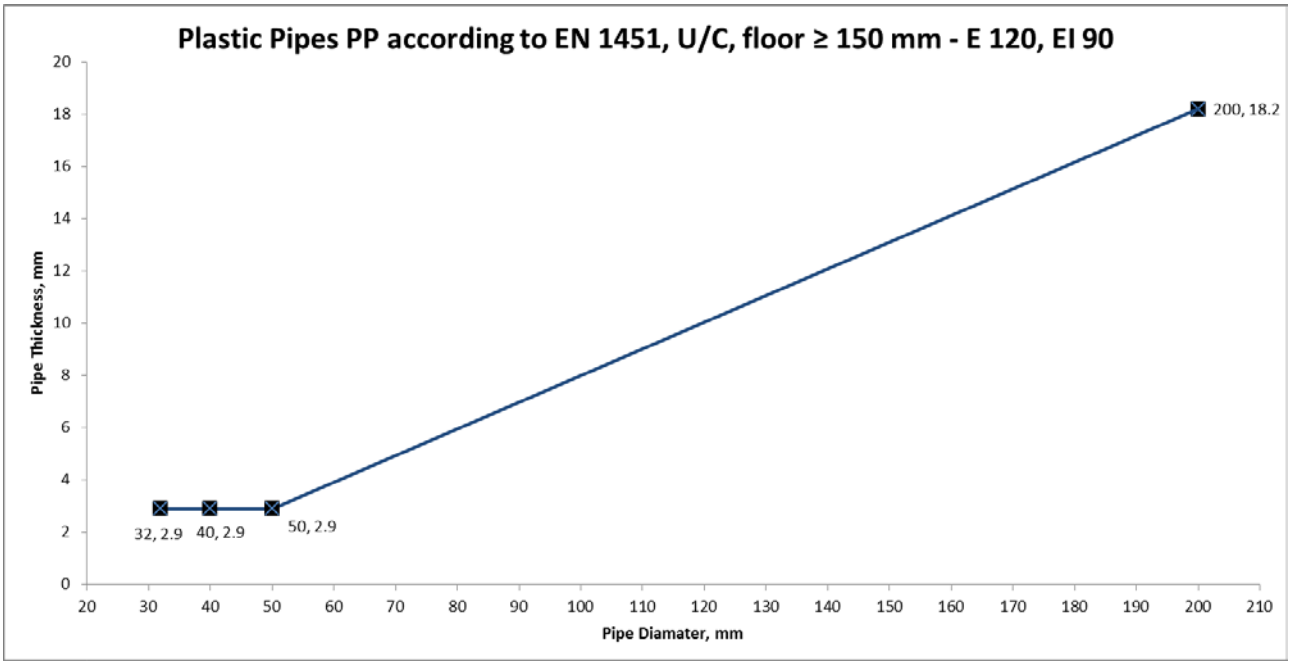

Plastic Pipes PVC according to EN 1452, U/C, floor ≥ 150 mm - EI 120
Pipe Thickness, mm
Pipe Diamater, mm
32, 1.8
40, 1.8
50, 1.8

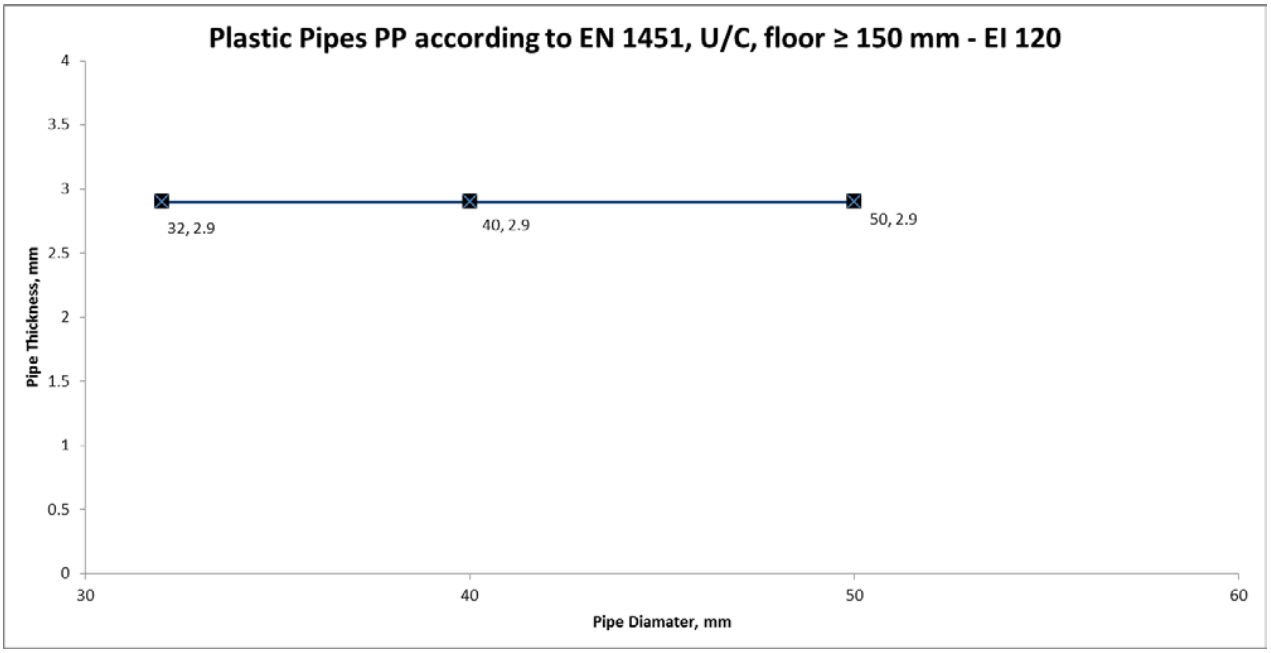
A.2.1.2 PP pipes with Astro X Series CE Pipe Wrap UL installed within both sides of rigid floor

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

Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) PP Pipes			
Penetration Specification	**Wrap Size / Number**	**Annulus Space (mm)**	**Classification**
PP Pipe 32 mm ø 2.9 mm wall thickness	1 off 40 mm (W) x 2 mm (T)	4	**EI 120 U/C**
PP Pipe 40 mm ø 2.9 mm wall thickness			
PP Pipe 50 mm ø 2.9 mm wall thickness			
PP Pipe 200 mm ø 4.9 mm wall thickness	5 off 40 mm (W) x 2 mm (T)	12	**E 20 U/C** **EI 15 U/C**
PP Pipe 200 mm ø 18.2 mm wall thickness			**E 120 U/C** **EI 90 U/C**



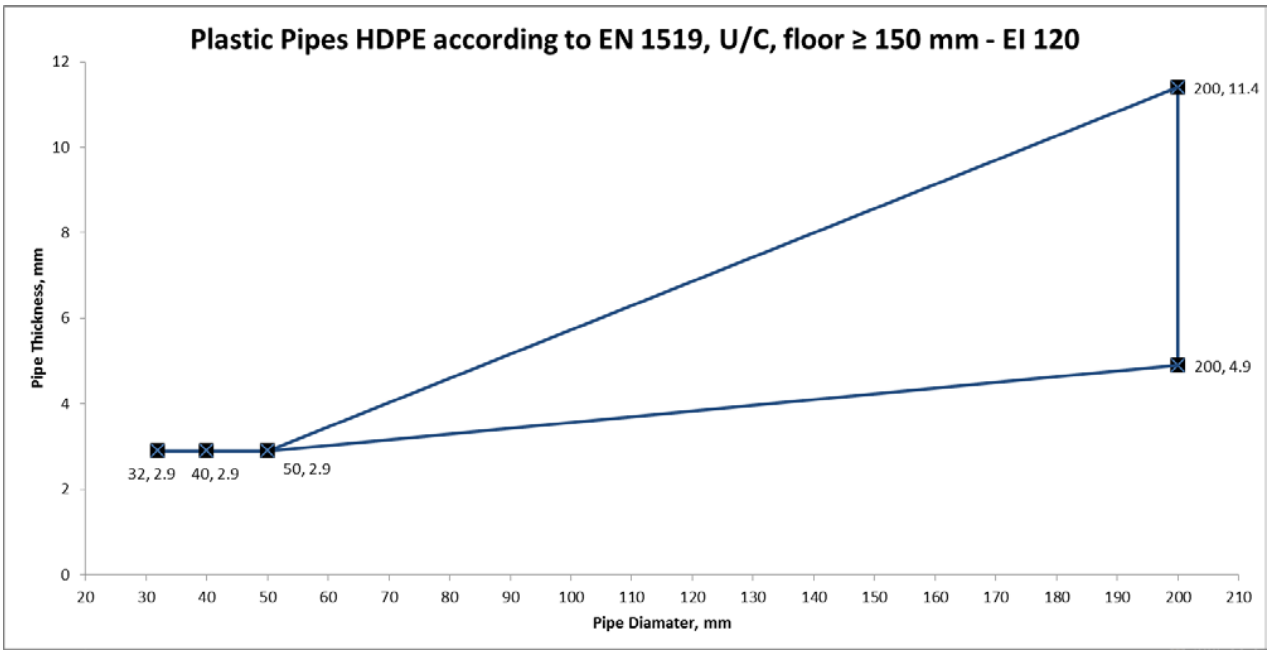

Plastic Pipes PP according to EN 1451, U/C, floor ≥ 150 mm - E 120, EI 90
Pipe Thickness, mm
Pipe Diamater, mm
32, 2.9
40, 2.9
50, 2.9
200, 18.2


Plastic Pipes PP according to EN 1451, U/C, floor ≥ 150 mm - EI 120
Pipe Thickness, mm
Pipe Diamater, mm
32, 2.9
40, 2.9
50, 2.9

A.2.1.3 HDPE pipes with Astro X Series CE Pipe Wrap UL installed within both sides of rigid floor

HDPE pipes according to EN 1519 with Astro X Series CE Pipe Wrap UL.

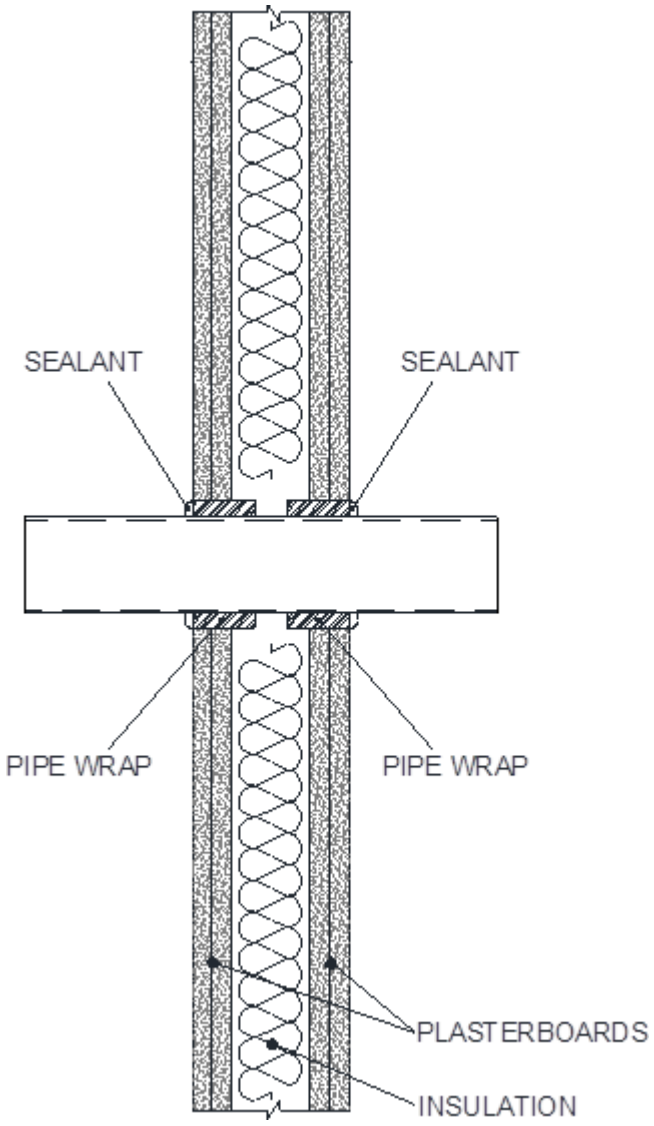
Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Rigid Floor (min 150 mm thick) HDPE Pipes			
Penetration Specification	**Wrap Size / Number**	**Annulus Space (mm)**	**Classification**
HDPE Pipe 32 mm ø 2.9 mm wall thickness	1 off 40 mm (W) x 2 mm (T)	4	**EI 120 U/C**
HDPE Pipe 40 mm ø 2.9 mm wall thickness			
HDPE Pipe 50 mm ø 2.9 mm wall thickness			
HDPE Pipe 200 mm ø 4.9 mm wall thickness	5 off 40 mm (W) x 2 mm (T)	12	
HDPE Pipe 200 mm ø 11.4mm wall thickness			



A.3 Wall construction with thickness of minimum 100 mm

A.3.1 Penetration seal with Astro X Series CE Pipe Wrap UL installed within both sides of flexible or rigid wall

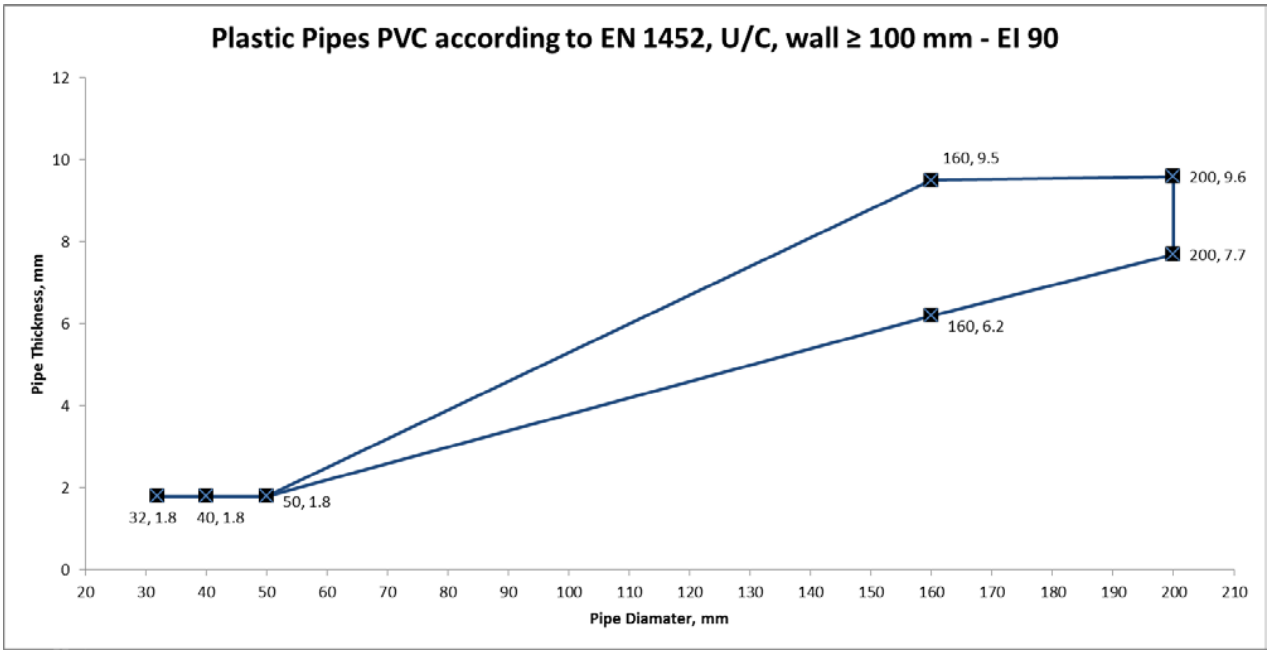
Construction details: Combustible pipes installed with a single Astro X Series CE Pipe Wrap UL within both sides. Maximum annular space according to the tables listed in A.3.1.1 to A.3.1.3 filled with Astro Intu Mastic.

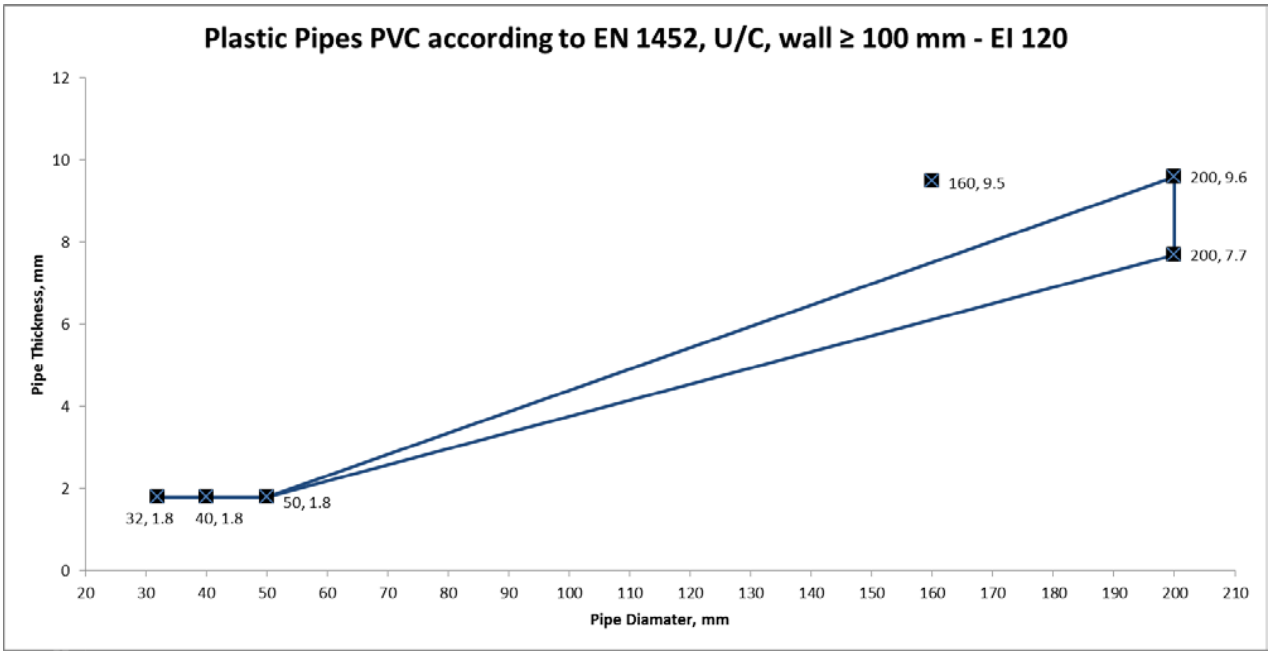


A.3.1.1 PVC pipes with Astro X Series CE Pipe Wrap UL installed within both sides of flexible or rigid wall

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

<table>
<tr><th colspan="4">Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Flexible or Rigid Wall (min 100 mm thick) PVC Pipes</th></tr>
<tr><th>Penetration Specification</th><th>Wrap Size / Number</th><th>Annulus Space (mm)</th><th>Classification</th></tr>
<tr><td>PVC Pipe 32 mm ø 1.8 mm wall thickness</td><td rowspan="3">1 off 40 mm (W) x 2 mm (T)</td><td rowspan="3">4</td><td rowspan="3">EI 120 U/C</td></tr>
<tr><td>PVC Pipe 40 mm ø 1.8 mm wall thickness</td></tr>
<tr><td>PVC Pipe 50 mm ø 1.8 mm wall thickness</td></tr>
<tr><td>PVC Pipe 160 mm ø 6.2 mm wall thickness</td><td rowspan="2">4 off 40 mm (W) x 2 mm (T)</td><td rowspan="2">10</td><td>EI 90 U/C</td></tr>
<tr><td>PVC Pipe 160 mm ø 9.5 mm wall thickness</td><td rowspan="3">EI 120 U/C</td></tr>
<tr><td>PVC Pipe 200 mm ø 7.7 mm wall thickness</td><td rowspan="2">5 off 40 mm (W) x 2 mm (T)</td><td rowspan="2">12</td></tr>
<tr><td>PVC Pipe 200 mm ø 9.6 mm wall thickness</td></tr>
</table>

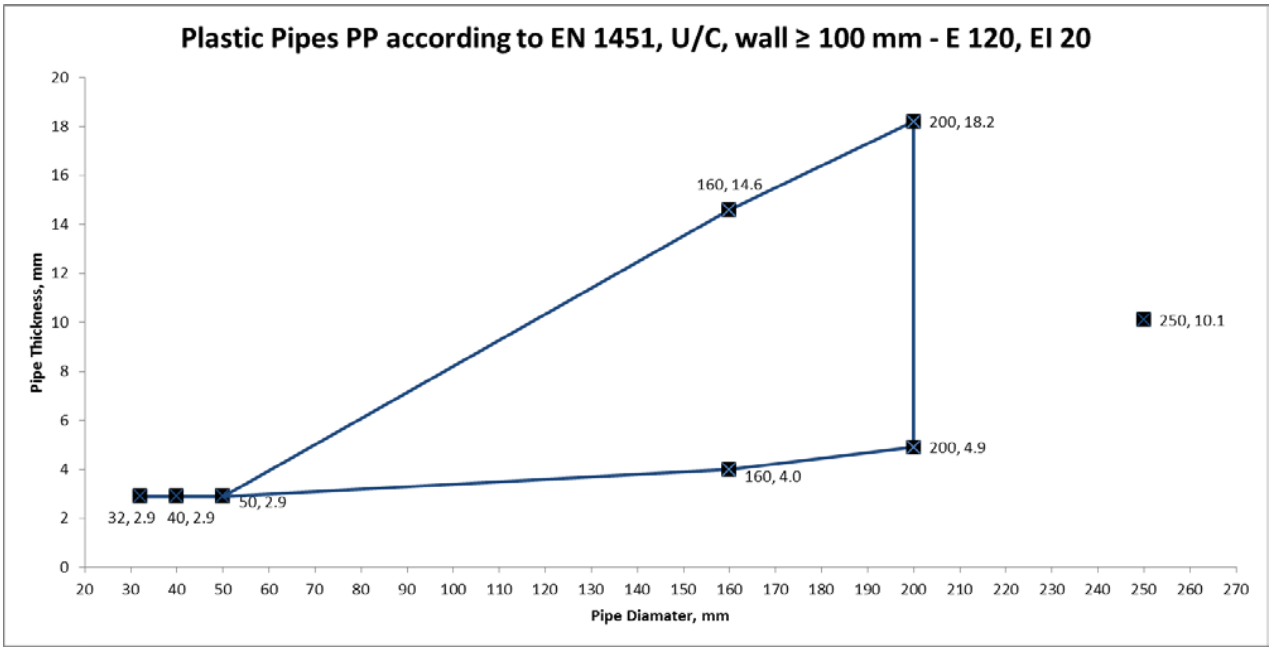


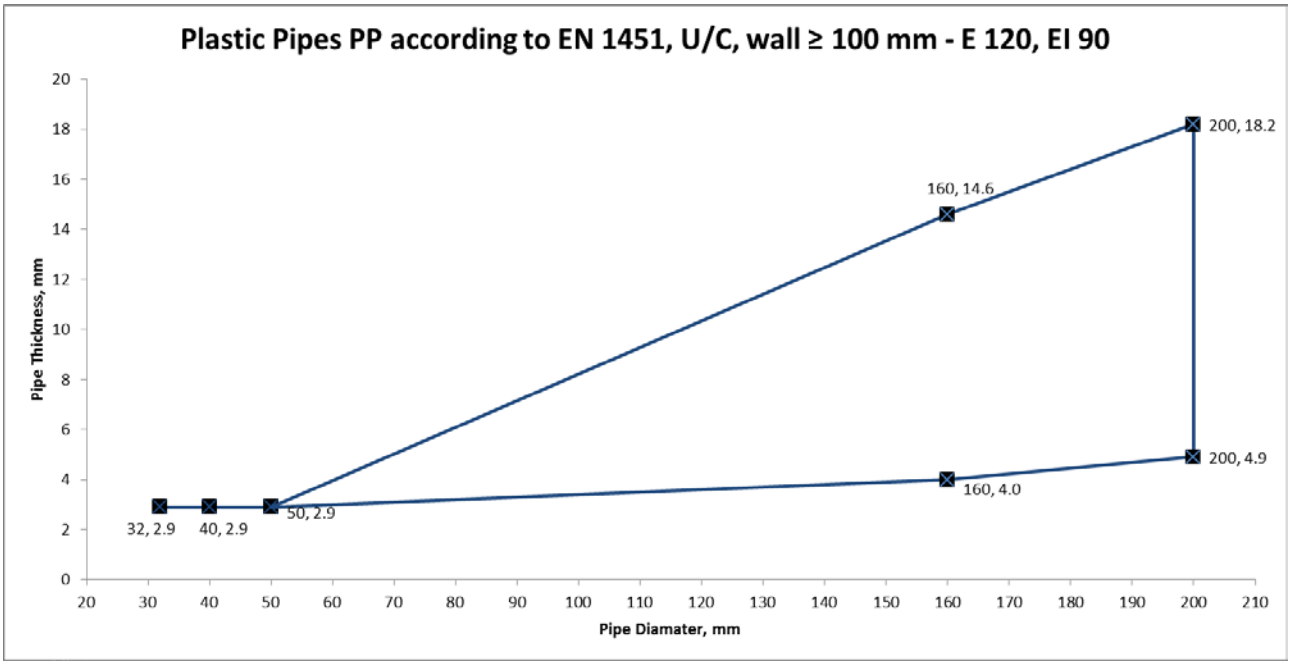

Plastic Pipes PVC according to EN 1452, U/C, wall ≥ 100 mm - EI 120
Pipe Thickness, mm
Pipe Diamater, mm
160, 9.5
200, 9.6
200, 7.7
50, 1.8
32, 1.8
40, 1.8

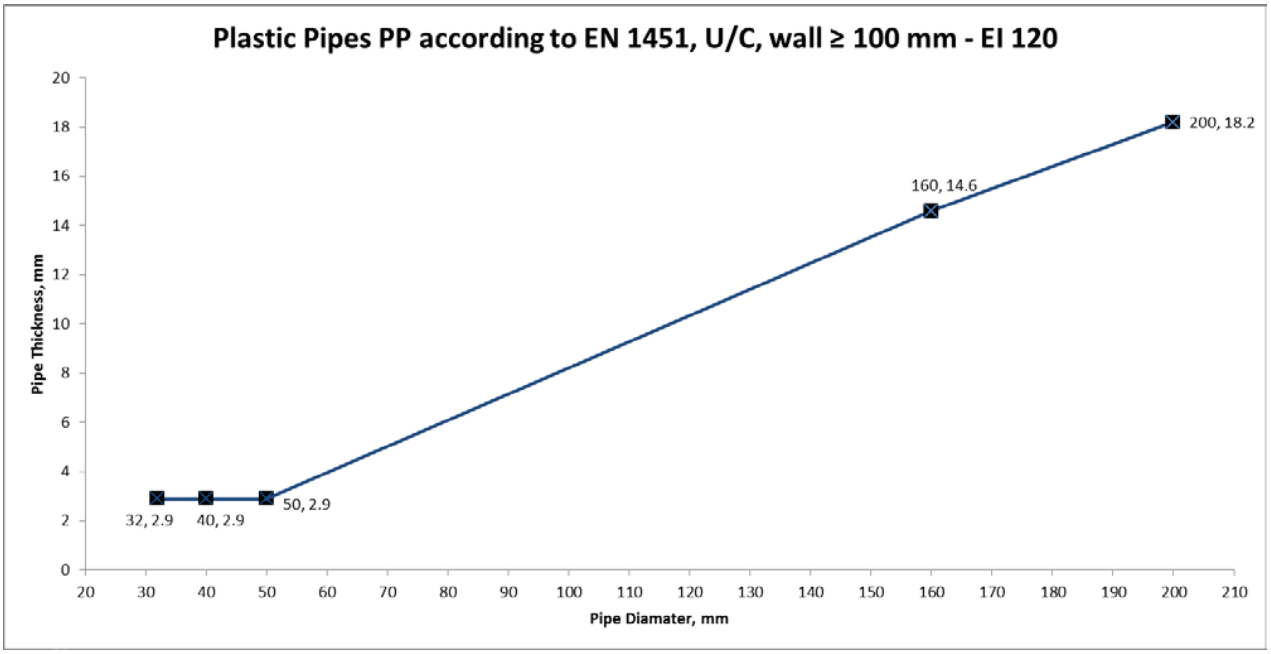
A.3.1.2 PP pipes with Astro X Series CE Pipe Wrap UL installed within both sides of flexible or rigid wall

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

Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Flexible or Rigid Wall (min 100 mm thick) PP Pipes			
Penetration Specification	**Wrap Size / Number**	**Annulus Space (mm)**	**Classification**
PP Pipe 32 mm ø 2.9 mm wall thickness	1 off 40 mm (W) x 2 mm (T)	4	**EI 120 U/C**
PP Pipe 40 mm ø 2.9 mm wall thickness			
PP Pipe 50 mm ø 2.9 mm wall thickness			
PP Pipe 160 mm ø 4.0 mm wall thickness	4 off 40 mm (W) x 2 mm (T)	10	**E 120 U/C** **EI 90 U/C**
PP Pipe 160 mm ø 14.6 mm wall thickness			**EI 120 U/C**
PP Pipe 200 mm ø 4.9 mm wall thickness	5 off 40 mm (W) x 2 mm (T)	12	**E 120 U/C** **EI 90 U/C**
PP Pipe 200 mm ø 18.2 mm wall thickness			**EI 120 U/C**
PP Pipe 250 mm ø 10.1 mm wall thickness	6 off 40 mm (W) x 2 mm (T)	14	**E 120 U/C** **EI 20 U/C**


Plastic Pipes PP according to EN 1451, U/C, wall ≥ 100 mm - E 120, EI 20
Pipe Thickness, mm
Pipe Diamater, mm
200, 18.2
160, 14.6
250, 10.1
200, 4.9
160, 4.0
50, 2.9
32, 2.9
40, 2.9

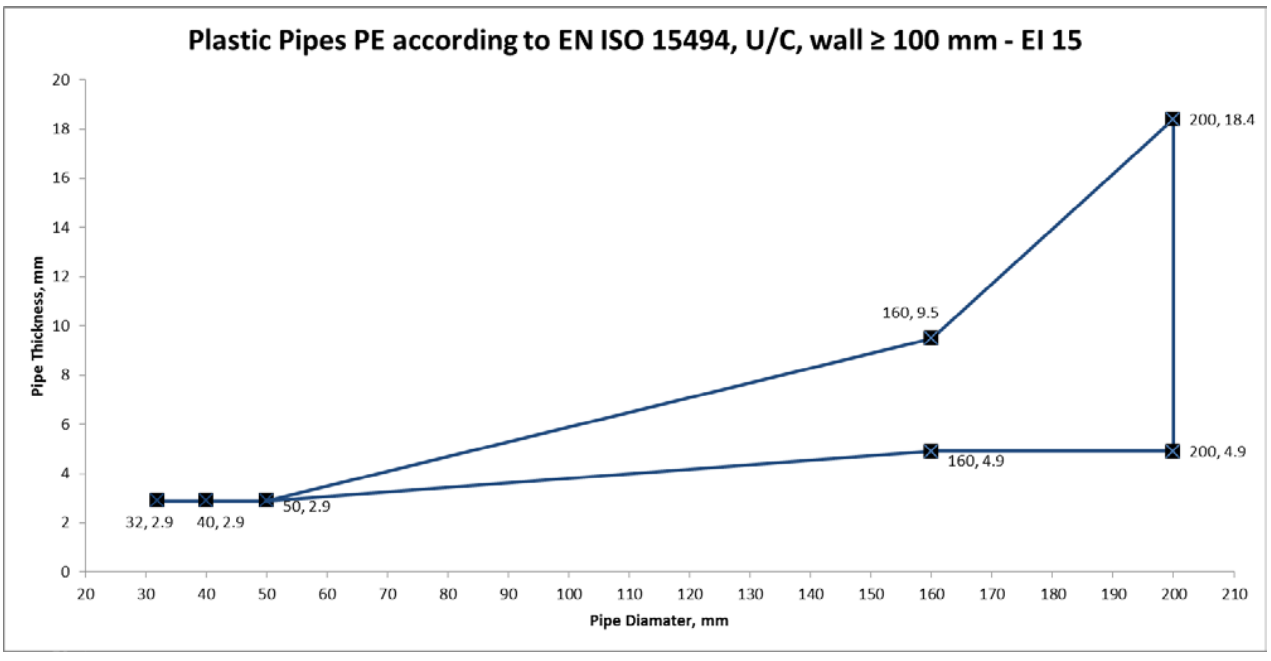

Plastic Pipes PP according to EN 1451, U/C, wall ≥ 100 mm - E 120, EI 90
Pipe Thickness, mm
Pipe Diamater, mm
200, 18.2
160, 14.6
200, 4.9
160, 4.0
50, 2.9
32, 2.9
40, 2.9

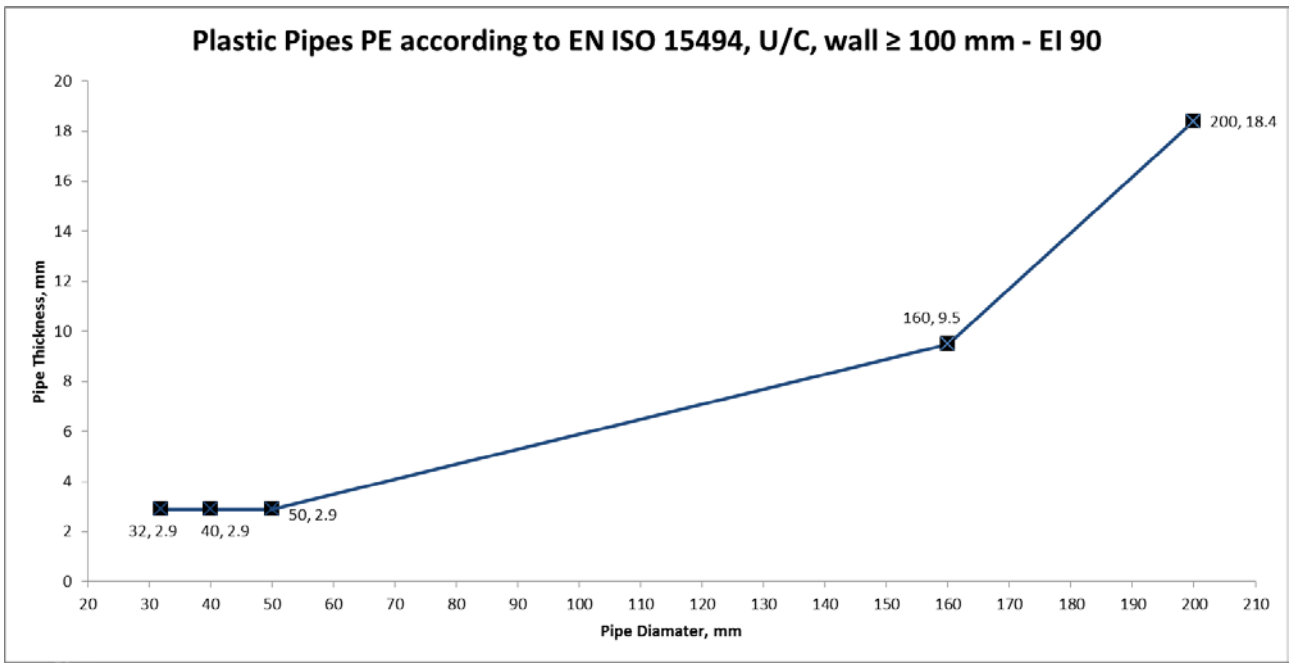

Plastic Pipes PP according to EN 1451, U/C, wall ≥ 100 mm - EI 120
Pipe Thickness, mm
Pipe Diamater, mm
32, 2.9
40, 2.9
50, 2.9
160, 14.6
200, 18.2

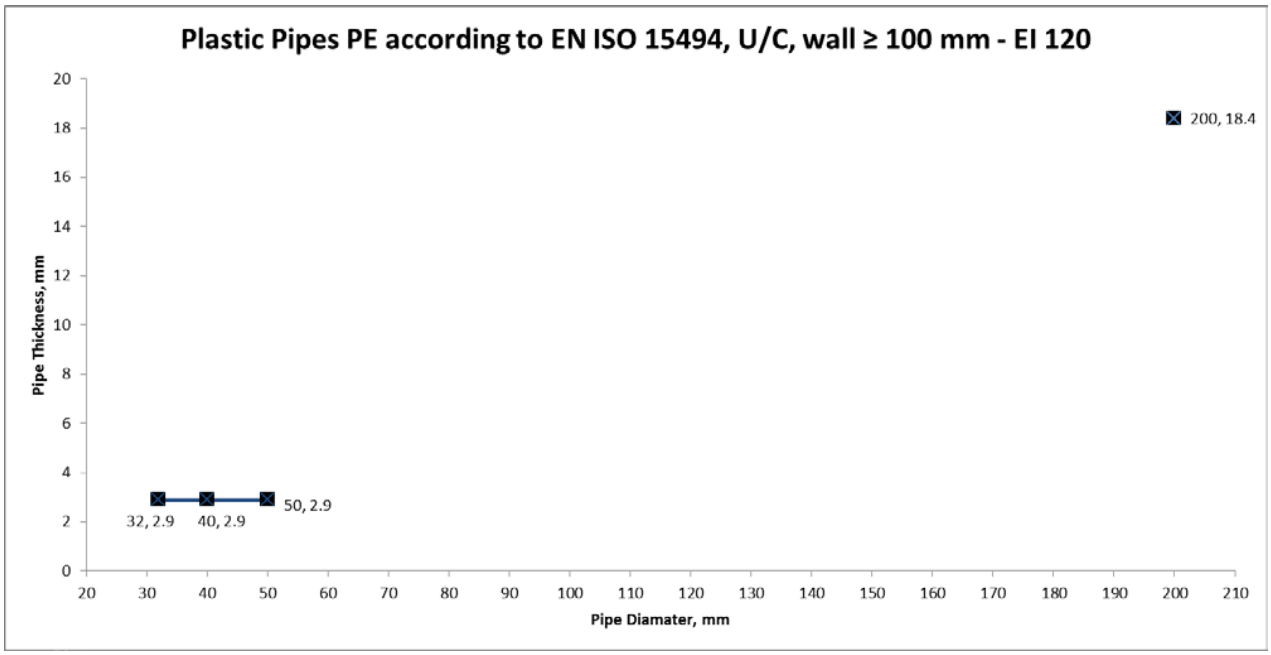
A.3.1.3 PE pipes with Astro X Series CE Pipe Wrap UL installed within both sides of flexible or rigid wall

PE pipes according to EN ISO 15494 with Astro X Series CE Pipe Wrap UL.

Astro X Series CE Pipe Wrap UL, Friction Fitted Flush to Both Sides of Flexible or Rigid Wall (min 100 mm thick) PE Pipes			
Penetration Specification	**Wrap Size / Number**	**Annulus Space (mm)**	**Classification**
PE Pipe 32 mm ø 2.9 mm wall thickness	1 off 40 mm (W) x 2 mm (T)	4	**EI 120 U/C**
PE Pipe 40 mm ø 2.9 mm wall thickness			
PE Pipe 50 mm ø 2.9 mm wall thickness			
PE Pipe 160 mm ø 4.9 mm wall thickness	4 off 40 mm (W) x 2 mm (T)	10	**EI 15 U/C**
PE Pipe 160 mm ø 9.5 mm wall thickness			**EI 90 U/C**
PE Pipe 200 mm ø 4.9 mm wall thickness	5 off 40 mm (W) x 2 mm (T)	12	**EI 15 U/C**
PE Pipe 200 mm ø 18.4 mm wall thickness			**EI 120 U/C**




Plastic Pipes PE according to EN ISO 15494, U/C, wall ≥ 100 mm - EI 90
Pipe Thickness, mm
Pipe Diamater, mm
200, 18.4
160, 9.5
50, 2.9
32, 2.9
40, 2.9


Plastic Pipes PE according to EN ISO 15494, U/C, wall ≥ 100 mm - EI 120
Pipe Thickness, mm
Pipe Diamater, mm
200, 18.4
50, 2.9
32, 2.9
40, 2.9