

UL-EU CERTIFICATE

Certificate No. UL-EU-01055-CPR
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Date of Issue 2018-04-27

Certificate Holder J. van Walraven Holding B.V.
Industrieweg 5
3641RK Mijdrecht
The Netherlands

Manufacturer J/001 / A/020

Certified Product Type Fire Stop – Pipe Sleeve
Product Trade Name Pacifyre MK II Firesleeve
Trademark N/A

Rating/Classification See Appendix

Harmonised Technical Specifications ETAG 026-2 / EN 13501-2
Additional information N/A
Expiry date 2028-04-26



Head of Notified Body
Chris Miles

This is to certify that representative samples of the Certified Product listed above have been investigated by Underwriters Laboratories to the Standard(s) indicated on this Certificate, in accordance with the UL Global Services Agreement and the UL-EU Mark Service Terms and Conditions ("Agreement"). The Certificate Holder is entitled to use the UL-EU Mark for the Certified Product listed on the certificate and manufactured at the production site(s) listed, in accordance with the terms of the Agreement. Only those products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



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This certificate relates to the use of Pacifyre MK II Firesleeve for fire stopping where there are service penetrations through floors and walls. The detailed scope is given in pages 3 to 18 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 120 minutes for differing services and wall/floor constructions.

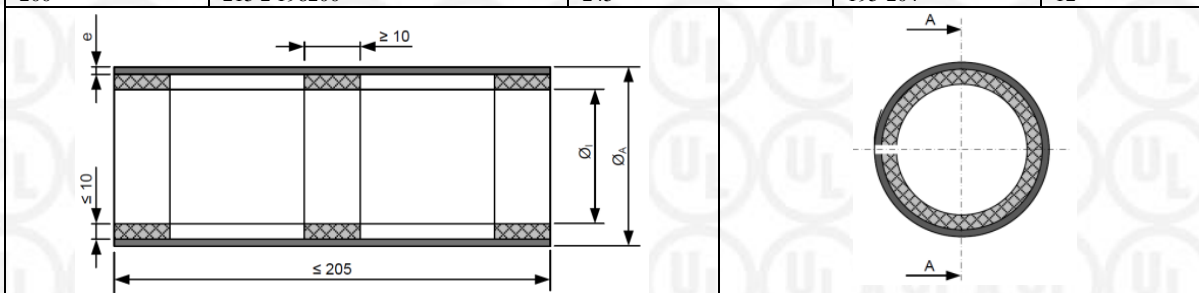
The products are certificated on the basis of:

- i) Inspection and surveillance of factory production control by UL
- ii) Fire resistance test data in accordance with EN 1366-3: 2009
- iii) Classification in accordance with EN 13501-2
- iv) Durability and Servicability as defined in ETAG 026-2

The durability class of Pacifyre MK II Firesleeve is Z₁ - intended for use at internal conditions with high humidity, excluding temperatures below 0°C. Pacifyre MK II Firesleeve has reaction to fire class E.

Dimensions of Pacifyre® MKII Firesleeve (mm):

DN	code	ØA (mm)	Ø1 (mm)	e (mm)
16	215 1 015017	40	15-17	1
20	215 1 018020	45	18-20	1
25	215 4 024026	50	23-28	4
32	215 4 030032	55	29-36	4
40	215 4 038041	65	38-44	4
50	215 4 048050	75	46-52	4
52	215 4 051053	75	48-55	4
56	215 4 054056	80	52-58	4
58	215 4 057059	85	55-61	4
63	215 4 063065	90	61-67	4
75	215 4 075077	100	70-79	4
80	215 4 078080	105	78-80	4
90	215 4 090092	115	86-94	4
100	215 4 099101	125	95-103	4
110	215 4 108110	135	104-113	4
120	215 8 123125	160	120-128	8
135	215 8 135137	170	131-139	8
140	215 8 138140	175	136-144	8
160	215 8 159161	195	155-164	8
180	215 8 180182	215	175-184	8
200	215 2 198200	245	195-204	12



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Products: Pacifyre MK II Firesleeve		
Product-type: Pipe closure		Intended use: Penetration Seal
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 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	See pages 4 - 5
BWR 3 Hygiene, health and environment		
EN 1026:2000	Air permeability (material property)	No performance determined
ETAG 026-2, Annex C	Water permeability (material property)	No performance determined
Submission of chemical constitution or declaration of manufacturer	Release of dangerous substances	Use categories: 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, clause 3.1.11 & 3.1.12	Durability and serviceability	Z ₁
BWR 7 Sustainable use of natural resources		
-	-	No performance determined



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Pacifyre MK II Firesleeve: In Rigid Floor with Walraven BIS Pacifyre® FPM mortar 150 mm						
Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PVC-U pipe [^] according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2 and EN 1452-1						
PVC-C pipes according to EN 1566-1						
32-110	1.9-8.1	0-120	4	200	120	120
125-160	2.5-11.8	0-100	8			
PE pipe [^] according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622, EN ISO 15494 and EN 12201						
32-110	2.7-15.1	0-70	4	0	120	120
	2.0-15.1					
125-160	3.1-9.5	0-110	8	200	60	60
	9.5-14.6					
PP pipe [^] according to EN ISO 1873-1, ÖNORM B 5174 and DIN 8077/8087						
32-110	2.0-15.1	0-110	4	0	120	120
125-160	3.1-4.0		8	200	60	60
	4.0-14.6					
PE-RT Type II / AI / PE-RT Type II-pipe [^] according to EN ISO 21003 and DIN 16836						
32-75	3.0-7.5	0-30	4	200	120	120

Option 1

Option 2

Key

- 1 Supporting construction
- a₁ Pipe / edge of seal separation (annular space)
- a₂ Separation between penetration seals

* Min./Max. pipe wall thickness shown, see illustrations on Page 5 for permitted pipe wall thickness via interpolation

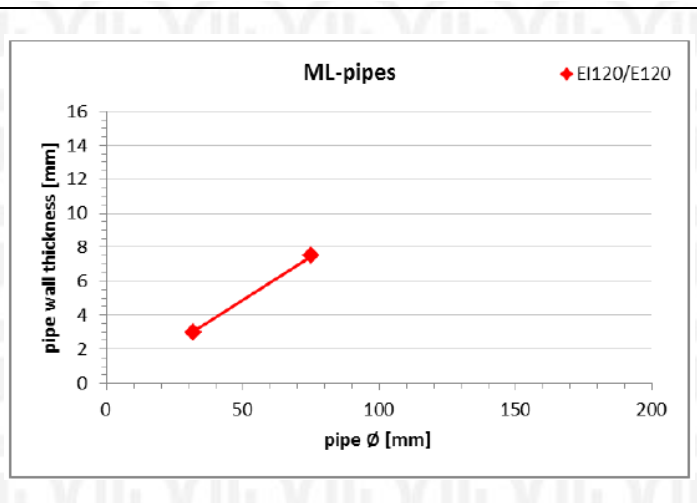
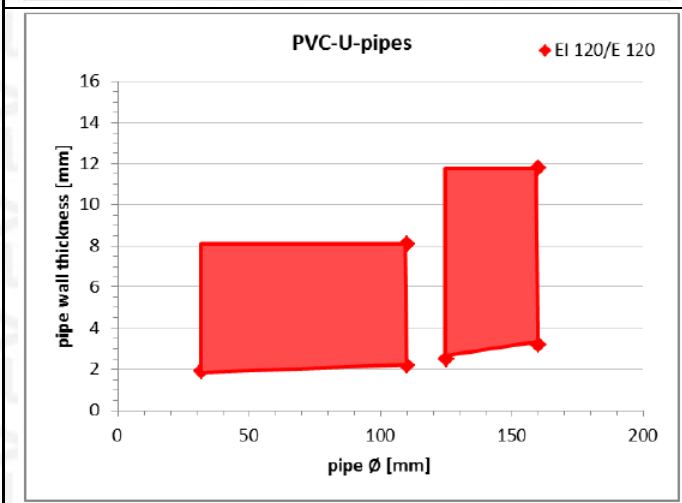
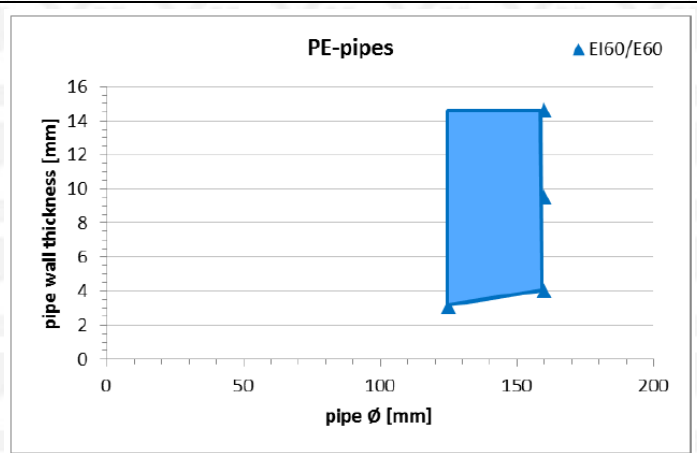
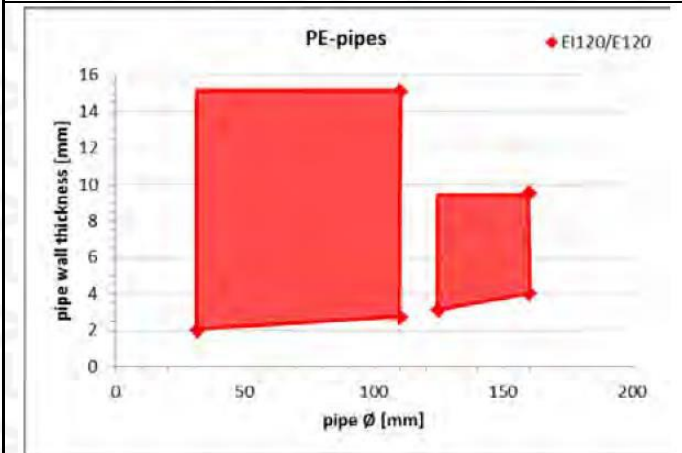
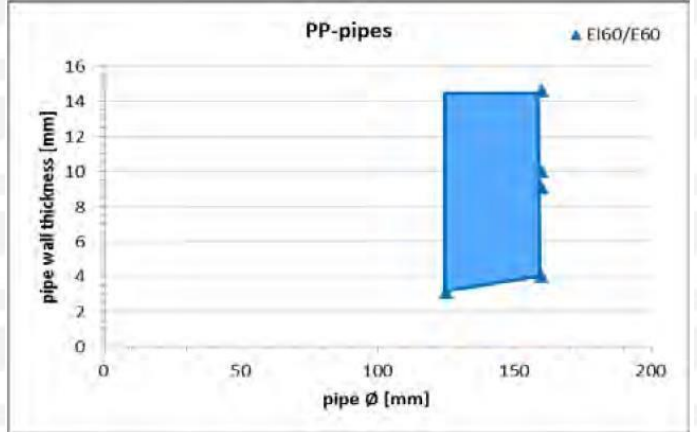
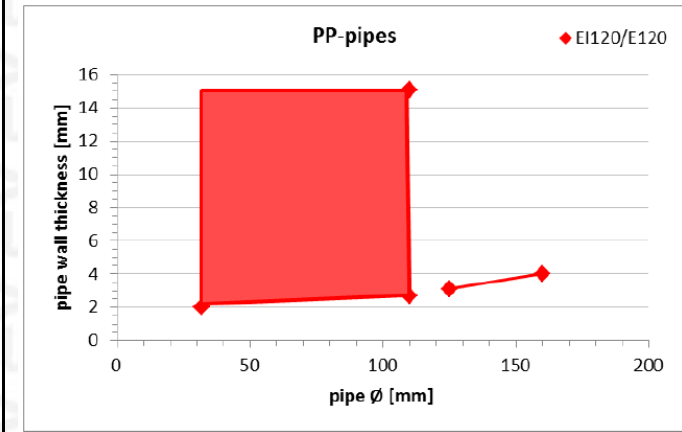
[^] U/U or U/C pipe end configuration



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Pacifyre MK II Firesleeve: In Rigid Floor with Walraven BIS Pacifyre® FPM mortar 150 mm



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Pacifyre MK II Firesleeve: In Rigid Floor 150 mm with Sealant and Stone Wool Backing [#]						
Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PVC-U pipe [^] according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2 and EN 1452-1						
PVC-C pipes according to EN 1566-1						
32-110	1.6-8.1	0-35	4	200	120	120
125-160	2.5-3.2	10-30	8		90	90
125-160	3.2-11.8					
PE pipe [^] according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622, EN ISO 15494 and EN 12201						
32-110	2.0-15.1	0-30	4	200	120	120
125-160	3.1-4.0	10-20	8		90	90
	4.0-14.6					
PP pipe [^] according to EN ISO 1873-1, ÖNORM B 5174 and DIN 8077/8087						
32-110	2.0-15.1	0-30	4	200	120	120
125-160	3.1-4.0	5-30	8		60	60
	4.0-14.6					
PE-RT Type II / AI / PE-RT Type II-pipe [^] according to EN ISO 21003 and DIN 16836						
32-75	3.0-7.5	0-30	4	200	120	60
32	3.0				120	120

Pacifyre® MK II FireSleeve
 Extends 45 mm
 Extends 10 mm
 Rigid Floor
 Annular sealing (a₂)
 Pipe

Option 1

Option 2

Key

1 Supporting construction
 a₁ Pipe / edge of seal separation (annular space)
 a₂ Separation between penetration seals

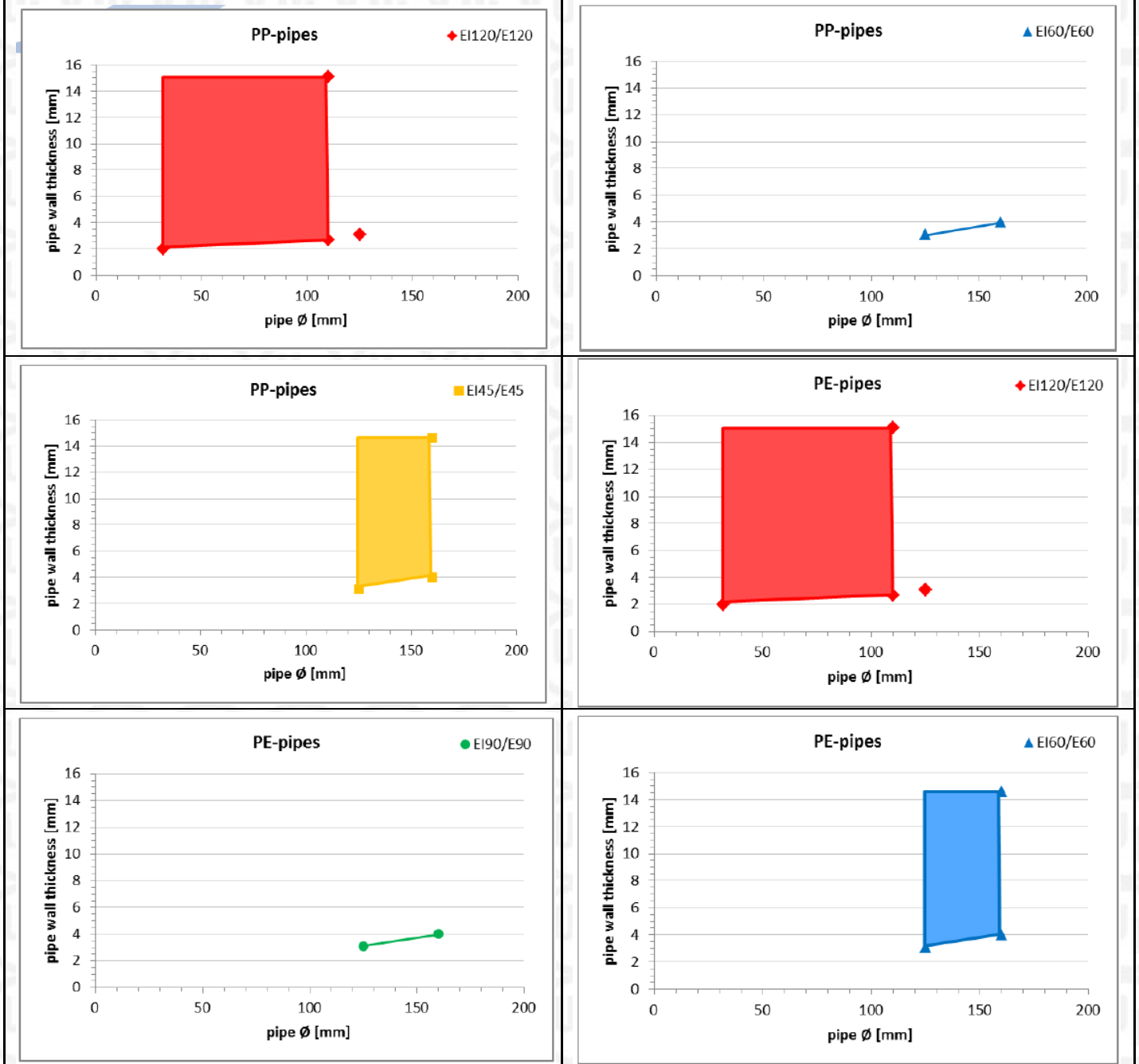
* Min./Max. pipe wall thickness shown, see illustrations on Pages 7&8 for permitted pipe wall thickness via interpolation
[^] U/U or U/C pipe end configuration
[#] Pacifyre® A (acrylic), Pacifyre® S (Silicone), Pacifyre® H (Hybrid) or Tangit Fire Protection FP 430 Acrylic annular sealing kit, 2 mm to both faces and provided with a stone wool backfilling to full depth



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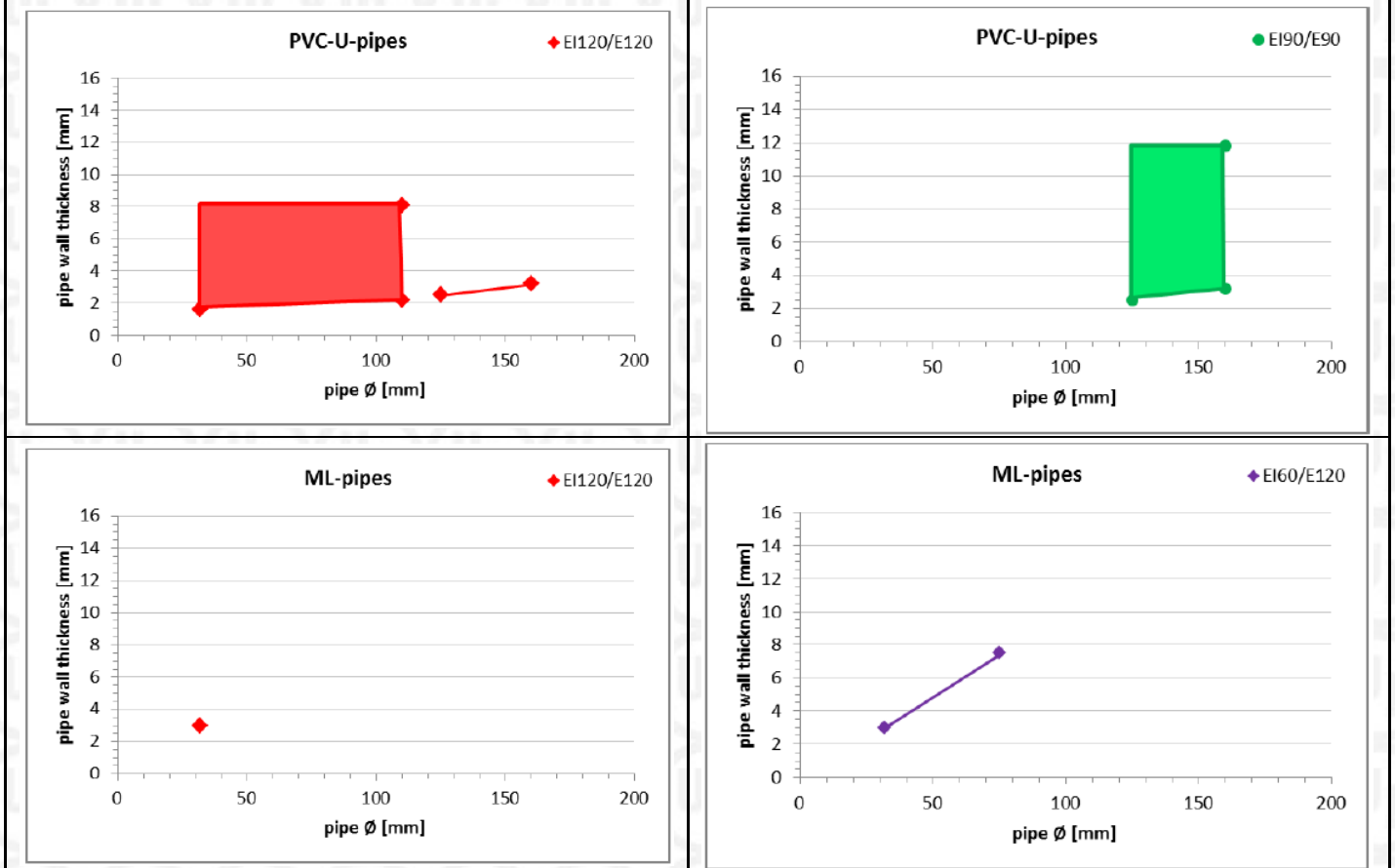
Pacifyre MK II Firesleeve: In Rigid Wall 150 mm with Sealant and Stone Wool Backing



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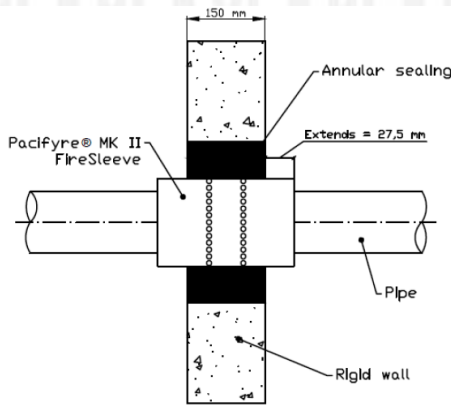
Pacifyre MK II Firesleeve: In Rigid Floor 150 mm with Sealant and Stone Wool Backing



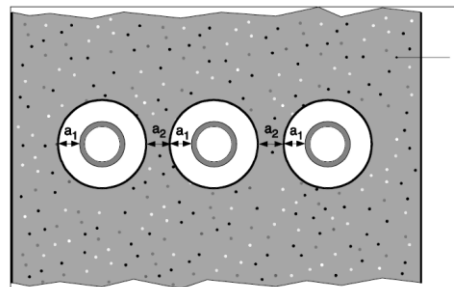
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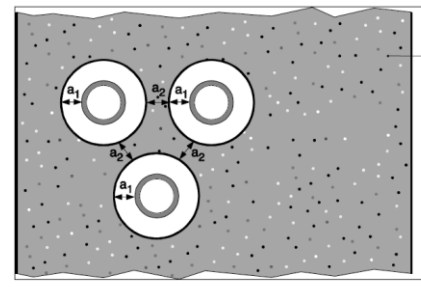
Pacifyre MK II Firesleeve: In Rigid Wall with Walraven BIS Pacifyre® FPM mortar 150 mm						
Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PVC-U pipe [^] according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2 and EN 1452-1 PVC-C pipes according to EN 1566-1						
32-110	1.9-8.1	0-100	4	200	120	120
125-160	2.5-11.8	0-90	8			
PE pipe [^] according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622, EN ISO 15494 and EN 12201						
32-110	2.0-15.1	5-95	4	0	120	120
125-160	3.1-9.5	5-85	8	200		
	9.5-14.6				60	60
PP pipe [^] according to EN ISO 1873-1, ÖNORM B 5174 and DIN 8077/8087						
32-110	2.0-15.1	0-100	4	0	120	120
125-160	3.1-4.0	0-90	8	200		
	4.0-14.6				60	60
PE-RT Type II / AI / PE-RT Type II-pipe [^] according to EN ISO 21003 and DIN 16836						
32-75	3.0-7.5	0-35	4	200	120	120



Option 1



Option 2



Key

- 1 Supporting construction
- a₁ Pipe / edge of seal separation (annular space)
- a₂ Separation between penetration seals

* Min./Max. pipe wall thickness shown, see illustrations on Page 10 for permitted pipe wall thickness via interpolation

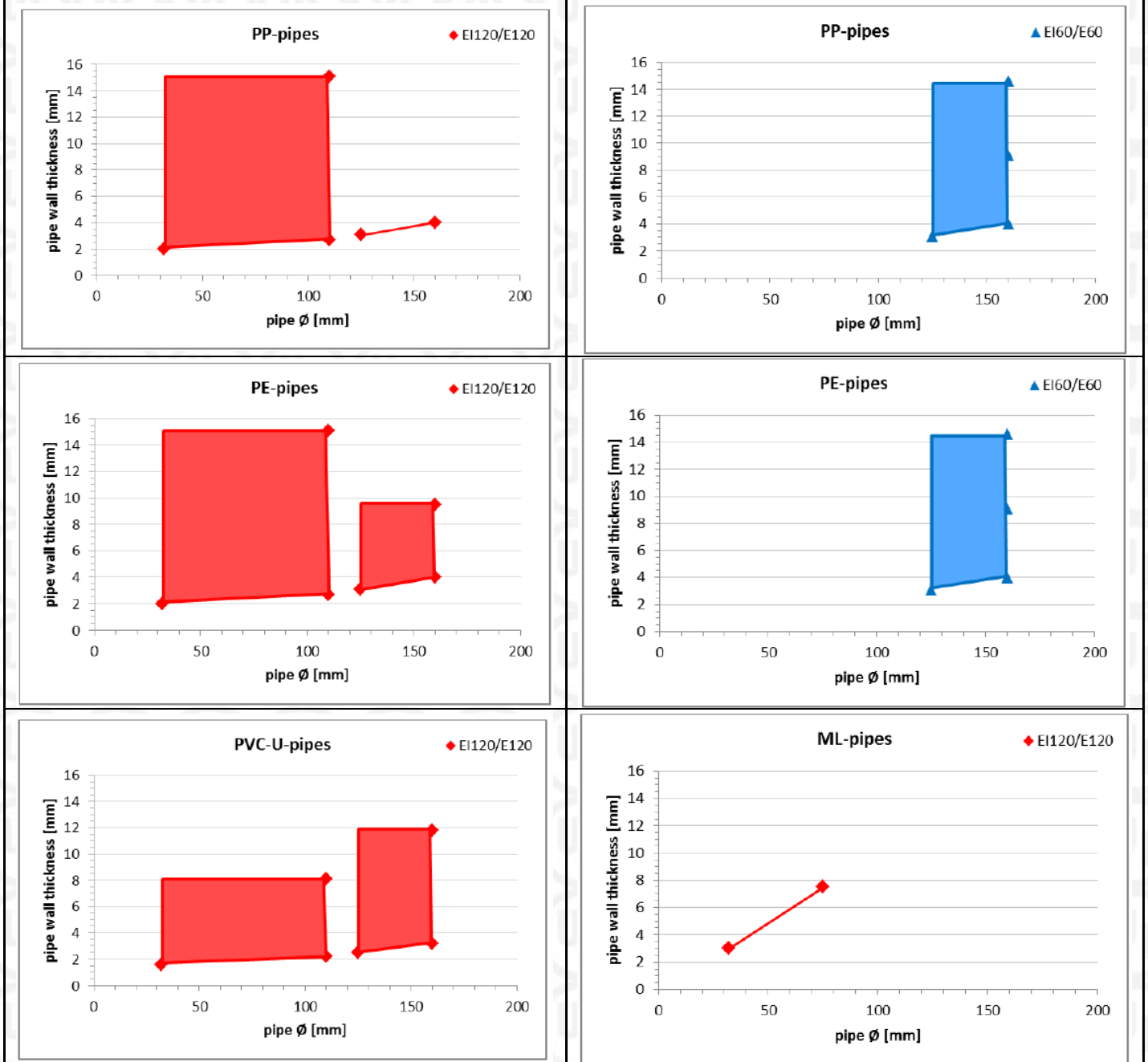
[^] U/U or U/C pipe end configuration



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Pacifyre MK II Firesleeve: In Rigid Floor with Walraven BIS Pacifyre® FPM mortar 150 mm



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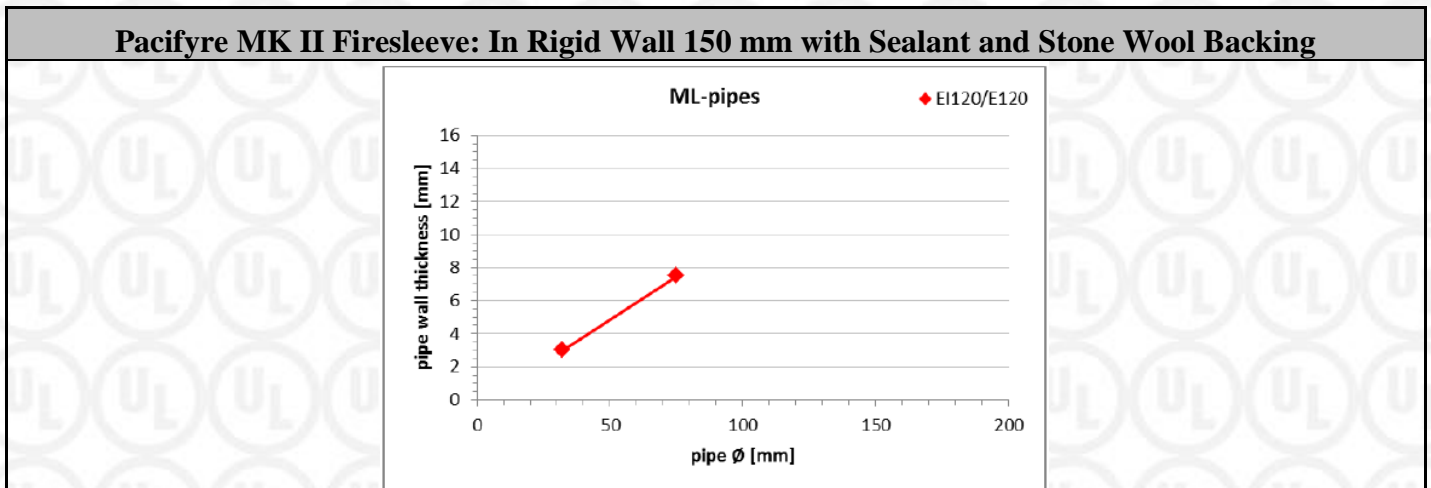
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Pacifyre MK II Firesleeve: In Rigid Wall 150 mm with Sealant and Stone Wool Backing [#]						
Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PE-RT Type II / AI / PE-RT Type II-pipe [^] according to EN ISO 21003 and DIN 16836						
32-75	3.0-7.5	8-35	4	200	120	120

* Min./Max. pipe wall thickness shown, see illustrations below for permitted pipe wall thickness via interpolation

[^] U/U or U/C pipe end configuration

[#] Pacifyre[®] A (acrylic), Pacifyre[®] S (Silicone), Pacifyre[®] H (Hybrid) or Tangit Fire Protection FP 430 Acrylic annular sealing kit, 2 mm to both faces and provided with a stone wool backfilling to full depth

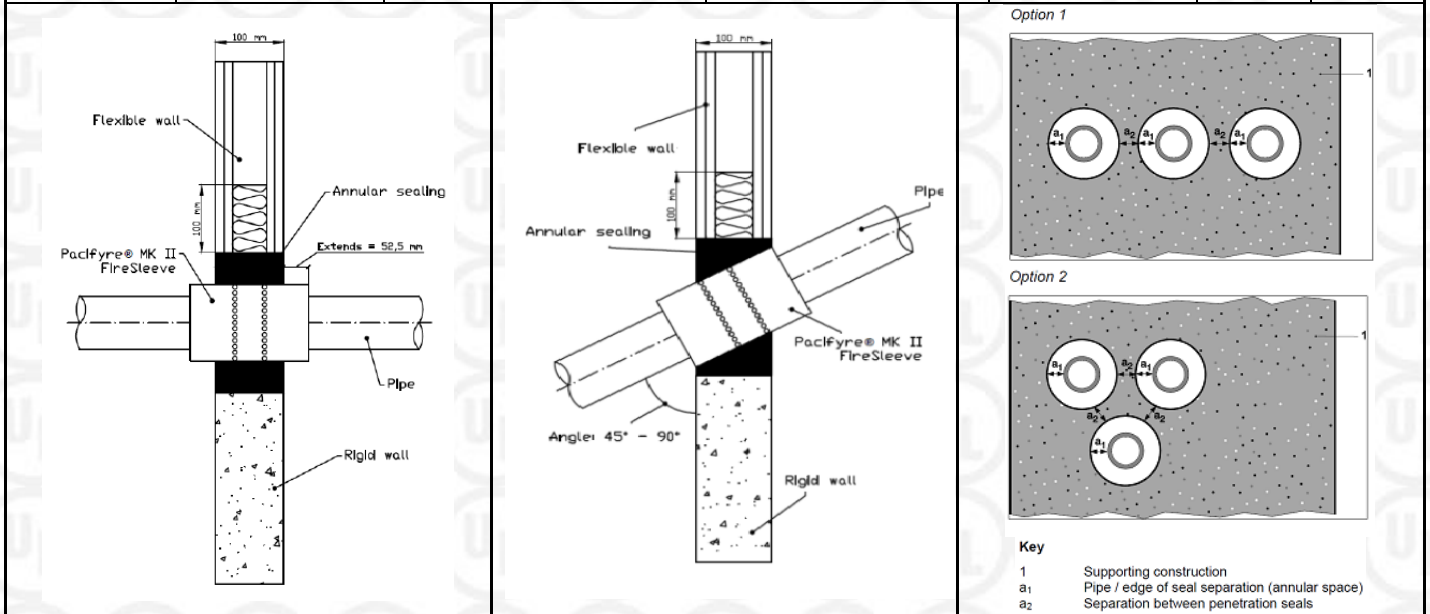


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Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with with Sealant and Stone Wool Backing[#]

Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PVC-U pipe [^] according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2 and EN 1452-1 PVC-C pipes according to EN 1566-1						
32-110	1.6-8.1	19-20	4	200	90	90
110	5.3-10.0	0-20				
125-160	2.5-11.8	20-21	8	200	90	90
160-180	3.2-3.6					
160	3.2-11.8					
125-180	2.5-13.3					
PE pipe [^] according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622, EN ISO 15494 and EN 12201						
32-110	2.0-2.7	12-26	4	0	90	90
	2.5-10.0	12-20				
110	4.2-10.0	0-20	8	200	90	120
125-180	3.1-4.4	20-22				
	4.4-14.6					
PP pipe [^] according to EN ISO 1873-1, ÖNORM B 5174 and DIN 8077/8087						
32-110	2.0-2.7	20-21	4	0	90	90
	2.7-10.0	20				
125-180	3.1-4.4	16-21	8	200	90	60
	4.4-16.4	20				



* Min./Max. pipe wall thickness shown, see illustrations on Page 14-16 for permitted pipe wall thickness via interpolation
[^] U/U or U/C pipe end configuration
[#] Pacifyre® A (acrylic), Pacifyre® S (Silicone), Pacifyre® H (Hybrid) or Tangit Fire Protection FP 430 Acrylic annular sealing kit, 25 mm to both faces and provided with a stone wool backfilling to full depth

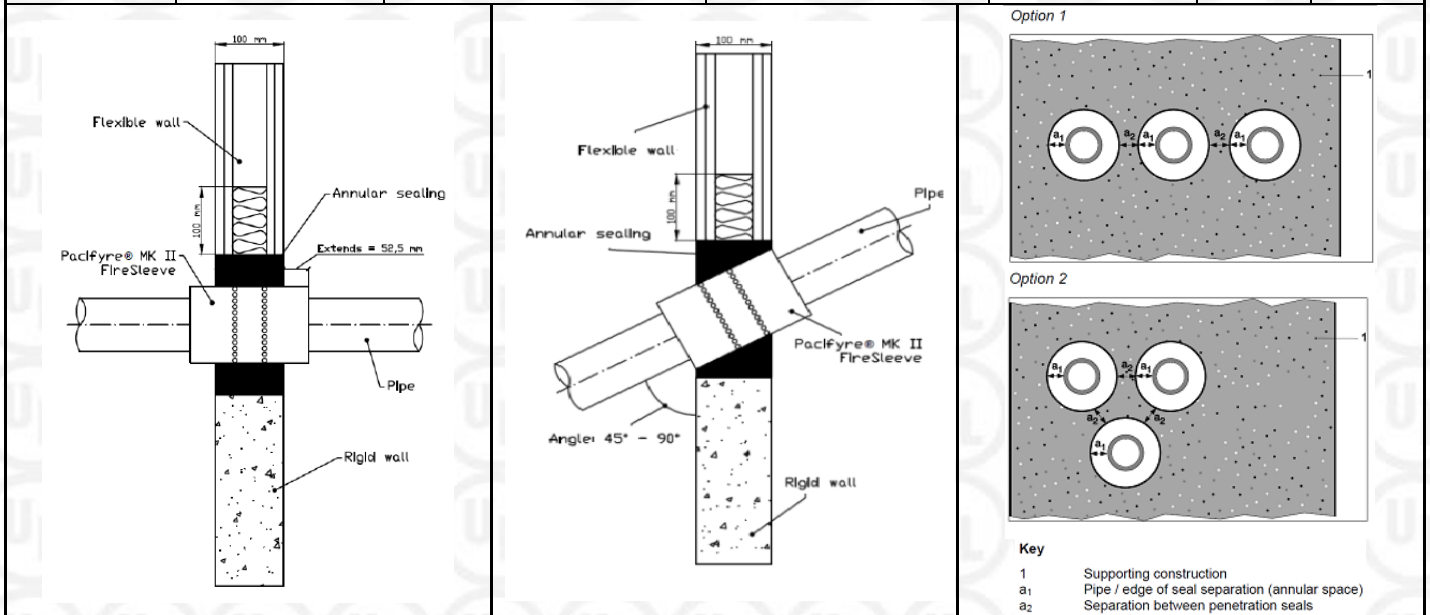


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Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with with Sealant and Stone Wool Backing[#]

Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PE-RT Type II / AI / PE-RT Type II-pipe [^] according to EN ISO 21003 and DIN 16836						
32-75	3.0-7.5	19-23	4	200	90	45
32	3.0	19-23			90	90



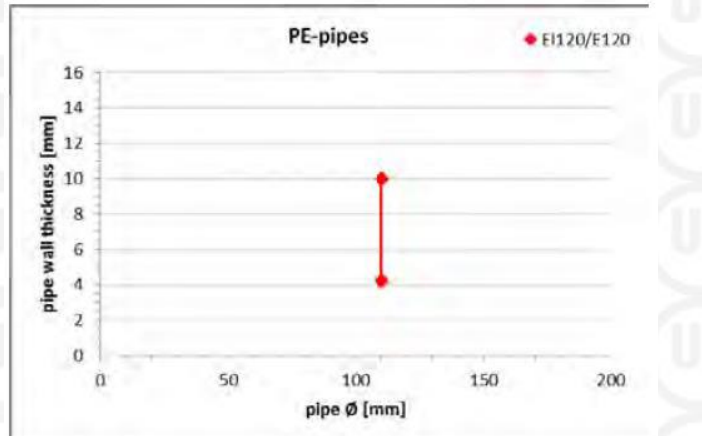
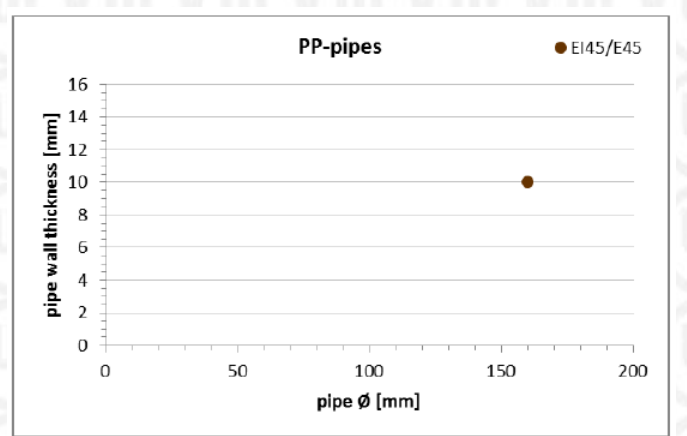
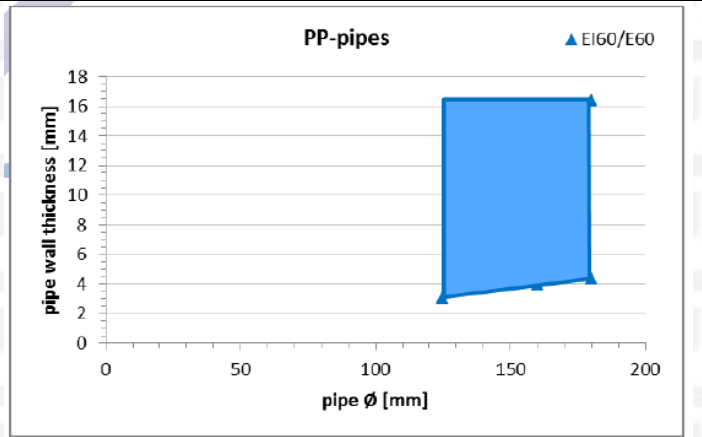
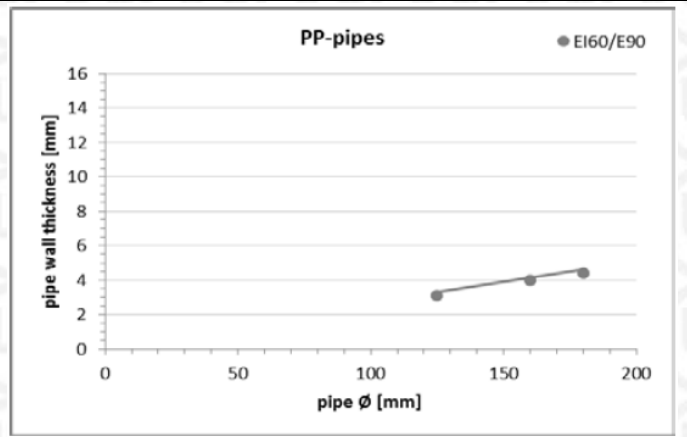
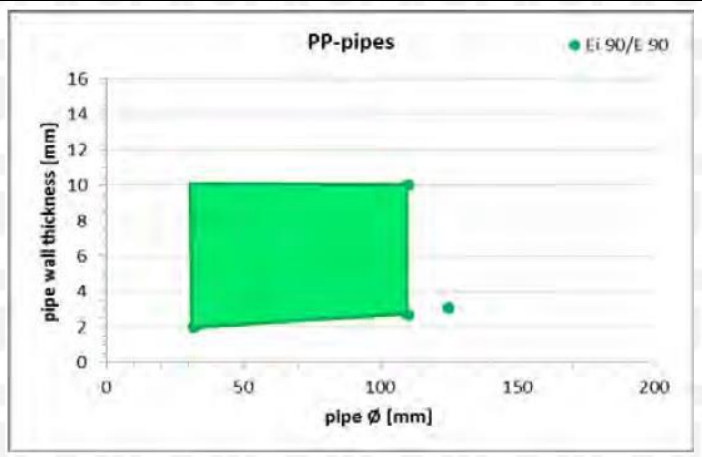
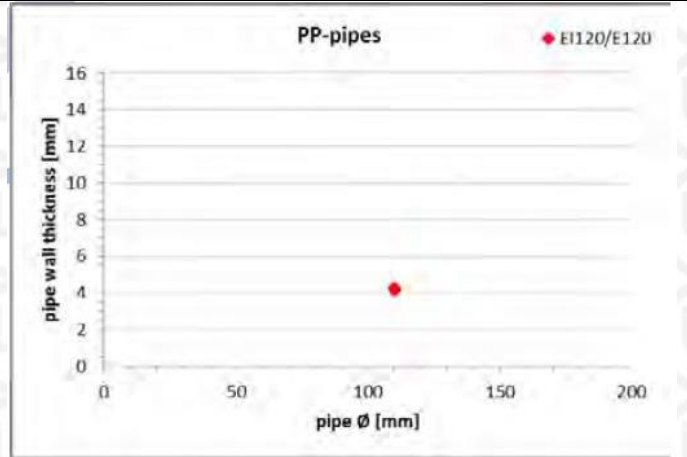
* Min./Max. pipe wall thickness shown, see illustrations on Page 14-16 for permitted pipe wall thickness via interpolation
[^] U/U or U/C pipe end configuration
[#] Pacifyre® A (acrylic), Pacifyre® S (Silicone), Pacifyre® H (Hybrid) or Tangit Fire Protection FP 430 Acrylic annular sealing kit, 25 mm to both faces and provided with a stone wool backfilling to full depth



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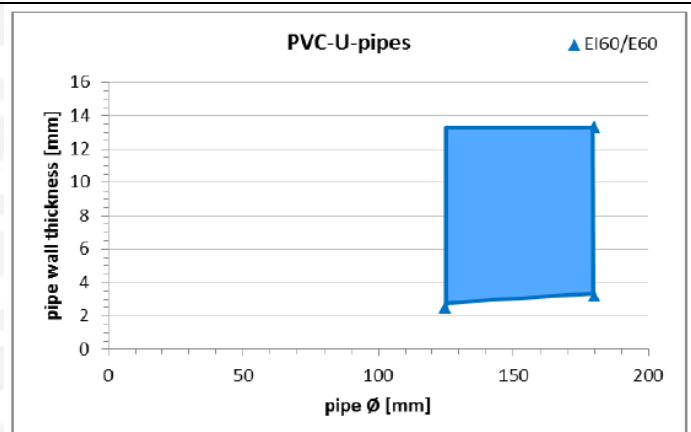
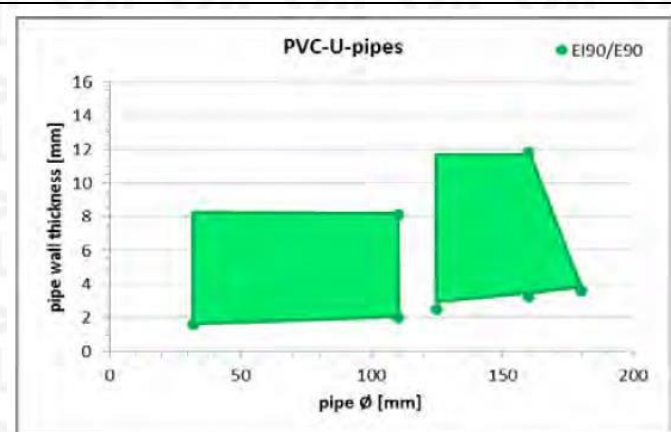
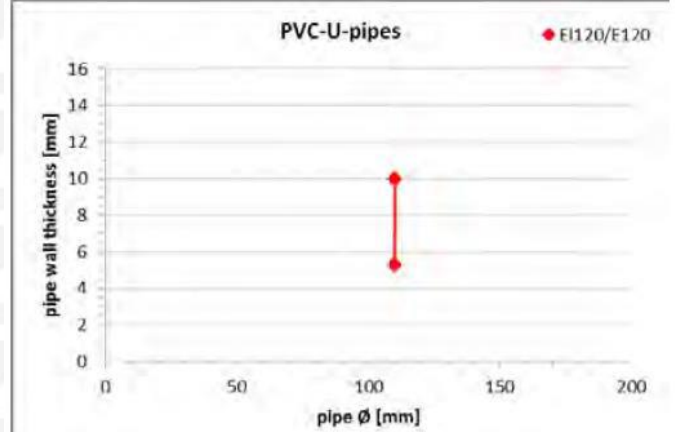
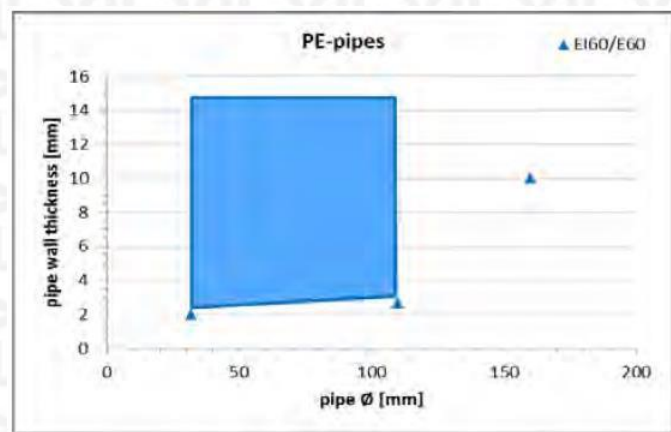
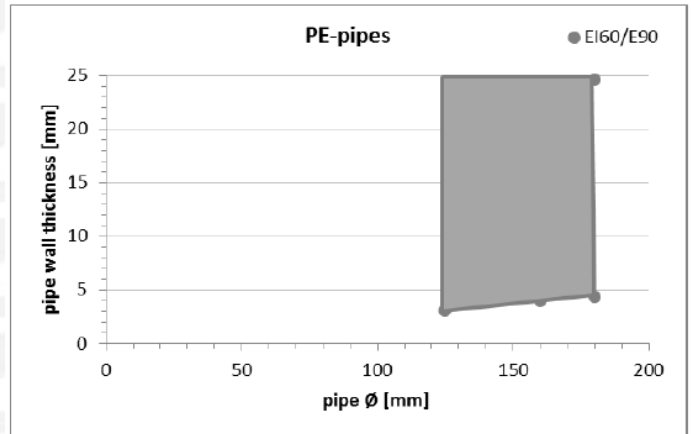
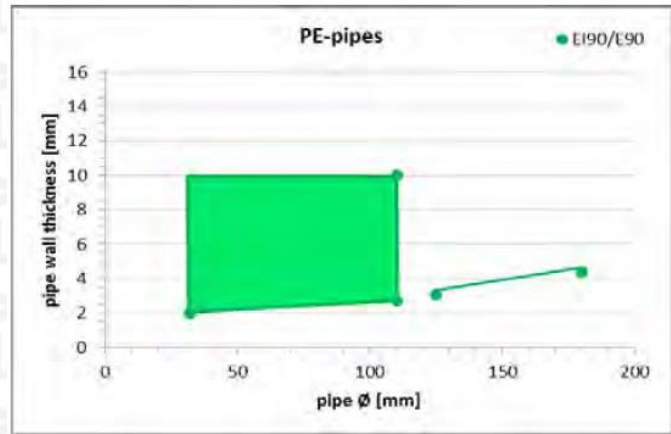
Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with with Sealant and Stone Wool Backing



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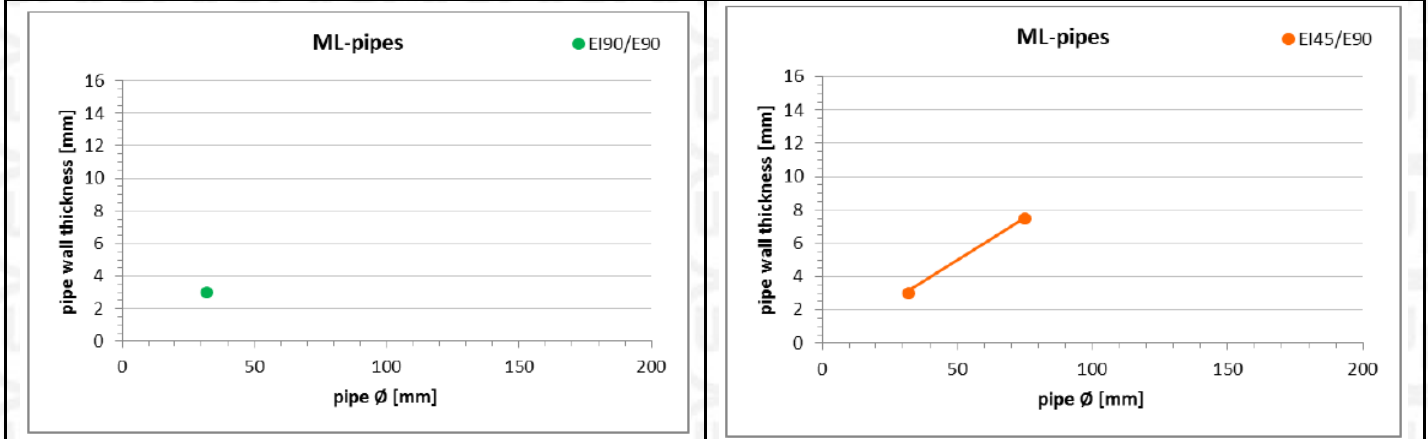
Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with with Sealant and Stone Wool Backing



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Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with with Sealant and Stone Wool Backing



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Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with Gypsum seal [#]						
Pipe diameter (mm)	Pipe wall thickness (mm)*	Annular space (a ₁) (mm)	Intumescent layer thickness (mm)	Min. separation between openings (a ₂) (mm)	Fire Resistance (mins.)	
					E	EI
PVC-U pipe [^] according to EN ISO 1452, EN ISO 15493, DIN 8061/8062, EN ISO 1453, KOMO-BRL 2023, EN 1329-1, EN 1453-2 and EN 1452-1						
PVC-C pipes according to EN 1566-1						
110	8.1	18-20	4	200	90	90
PE pipe [^] according to EN ISO 1872-1, EN 13244, DIN 8074/8075, EN 12201-2, EN 1622 and EN 12201						
110	2.7	10-30	4	200	90	90
PP pipe [^] according to ISO 21003						
110	15.1	10-35	4	200	90	60

Option 1

Option 2

Key

- 1 Supporting construction
- a₁ Pipe / edge of seal separation (annular space)
- a₂ Separation between penetration seals

* Min./Max. pipe wall thickness shown, see illustrations on Page 18 for permitted pipe wall thickness via interpolation

[^] U/U or U/C pipe end configuration

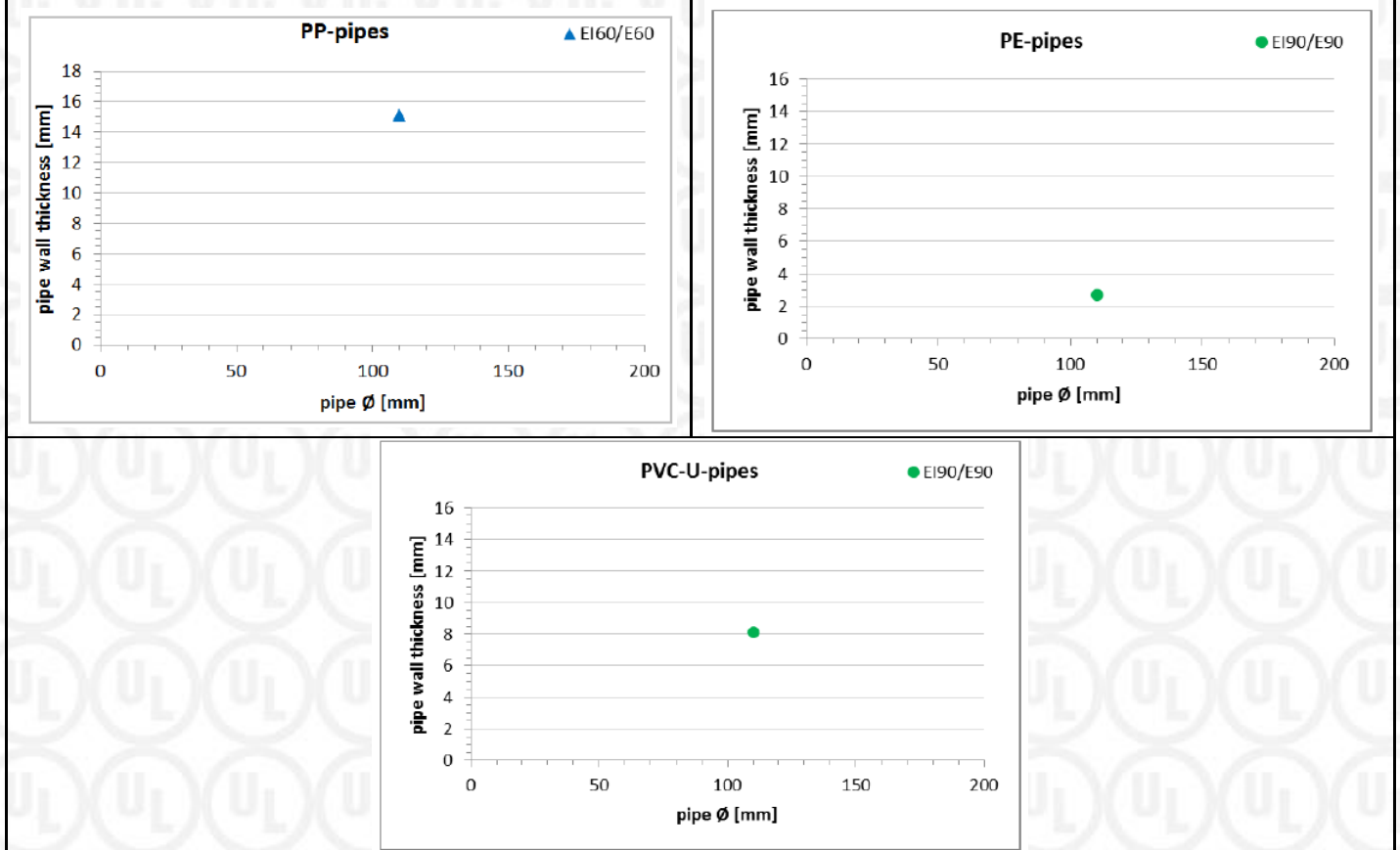
[#] Gypsum annular sealing kit, 25 mm to both faces and provided with a stone wool backfilling to full depth



Appendix UL-EU CERTIFICATE

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Pacifyre MK II Firesleeve: In EI 60/EI 90 Flexible or Rigid Wall 100 mm with Gypsum seal[#]



Appendix UL-EU Certificate

Certification Mark	UL-EU mark
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The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at www.ul.com.

