

UL-EU CERTIFICATE

Certificate No. UL-EU-00914
Page 1/7
Date of Issue 2015-10-09

Certificate Holder Polyseam AS
Ravneveien 7
Linnestad Næringsområde
N-3174 Revetal
Norway

Manufacturer Polyseam Ltd
Shaw Park
Silver Street
Huddersfield, West Yorkshire
HD5 9AF, UK

Certified Product Type Fire Stop – Penetration Seals
Product Trade Name Protecta FR Graphite
Trademark N/A

Rating/Classification See Appendix

Harmonised Technical Specifications ETAG 026-2 / EN 13501-2
Supporting Documentation ETA 14/0242, EC – CERTIFICATE OF CONSTANCY OF
PERFORMANCE - 0843 – CPR – 0188, Classification
Report No. 4786457143

Additional information N/A

Expiry date 2015-10-09



Certification Manager
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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00914
Page 2/7
Date of Issue 2015-10-09

This certificate relates to the use of Protecta FR Graphite for fire stopping where there are service penetrations through floors and walls. The detailed scope is given in pages 3 to 8 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 240 minutes for differing services and wall/floor constructions.

The products are certificated on the basis of:

- i) ETA 14/0242
- ii) EC – CERTIFICATE OF CONSTANCY OF PERFORMANCE 0843 – CPR – 0188
- iii) Classification report No. 4786457143
- iv) Inspection and surveillance of factory production control by UL
- v) Fire resistance test data in accordance with EN 1366-3: 2009
- vi) Classification in accordance with EN 13501-2
- vii) Durability and Servicability as defined in ETAG 026-2

The durability class of Protecta FR Graphite is Z₂ - intended for use at internal conditions with humidity classes other than Z1, excluding temperatures below 0°C.

The Protecta FR Graphite is supplied in liquid form contained within 310 & 380 ml cartridges and 600 ml foil packs.



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00914
 Page 3/7
 Date of Issue 2015-10-09

Products: Protecta FR Graphite		
Product-type: Penetration Sealant & 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 F
EN 13501-2	Resistance to fire	See pages 4 - 9
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*	53 (0;-1) dB
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 ₂
BWR 7 Sustainable use of natural resources		
-	-	No performance determined

* At 25 mm depth

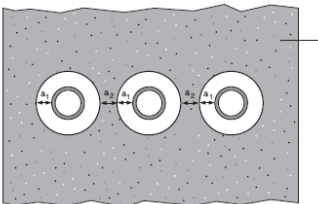
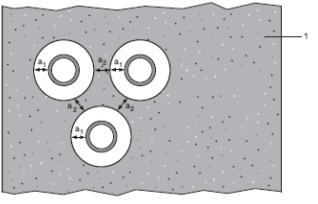


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00914
 Page 4/7
 Date of Issue 2015-10-09

Protecta FR Graphite: Service Penetration Seals in Drywalls and Masonry Walls								
Substrate	Minimum Wall Thickness (mm)	Penetrating Services	Seal Position	Seal & Backing Width (a ₁)	Permitted Configuration for Seal Separation	Fire Resistance (mins.)		
						E	EI	
Gypsum board/ Masonry/ Concrete	100	PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1, PVC-C according to EN 1566-1						
		Diameter 40 mm, wall thickness 1.9 – 3.7 mm to diameter 110 mm, wall thickness 2.7-6.6 mm	Both Sides	10-30 mm	1 & 2 between PVC-U pipes	120	120	
		Diameter 40, wall thickness 1.9 – 3.7 mm			1 & 2 between PVC-U pipes & between 40 mm Ø PE pipes	120	120	
		Diameter 40 mm, wall thickness 1.9 – 3.7 mm to diameter 110 mm, wall thickness 2.7-6.6 mm			1 & 2 between PVC-U pipes & between 40-110 mm Ø PE pipes	60	60	
		Diameter 40 mm, wall thickness 1.9 – 3.7 mm to diameter 110 mm, wall thickness 2.7-6.6 mm			1 & 2 between PVC-U pipes & between 110 mm Ø PP pipes	120	120	
		PE pipe according to EN 1519-1, EN 12201-2 and EN 12666-1, ABS according to EN 1455-1 and pipes made from SAN+PVC according to EN 1565-1						
		Diameter 40 mm, wall thickness 2.4-3.7 mm	Both Sides	10-30 mm	1 & 2 between PE pipes & between 40 mm Ø PVC-U pipes	120	120	
		Diameter 40, wall thickness 2.4-3.7 mm to diameter 110 mm, wall thickness 4.3-10 mm			1 & 2 between PE pipes & between 40-110 mm Ø PVC-U pipes	60	60	
		Diameter 110 mm, wall thickness 4.3-10 mm			1 between PE pipes	120	90	
		PP pipe according to EN 1852-1: 2009						
		Diameter 54 mm, wall thickness 0.8-14.2 mm	Both Sides	30 mm	1 & 2 between 40-110 mm Ø PVC-U pipes	120	120	

Penetration Seal: Combustible pipes sealed with 25 mm deep Protecta FR Graphite, to both sides of the wall backed with Stonewool (35kg/m³ density), 25 mm deep. Minimum separation between penetration seals of 30 mm.
 All pipe classifications are pipe end configuration U/C and C/C (U=Uncapped, C=Capped)

Configuration 1	Configuration 2
	
<p>Key 1 Supporting construction a₁ Pipe / edge of seal separation (annular space) a₂ Separation between penetration seals</p>	<p>Partition wall must incorporate a full fill core insulation of Stonewool (35kg/m³ density)</p>



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00914
 Page 5/7
 Date of Issue 2015-10-09

Protecta FR Graphite: Service Penetration Seals for Pipes in Masonry Walls						
Substrate	Minimum Wall Thickness (mm)	Penetrating Services	Seal Position	Seal & Backing Width (a ₁)	Fire Resistance (mins.)	
					E	EI
Masonry/ Concrete	150	PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1, PVC-C according to EN 1566-1				
		Diameter 48 mm, wall thickness 3.2 mm	Both Sides	17 mm	240	240
		Diameter 68 mm, wall thickness 2 mm		41 mm		
		Diameter 110 mm, wall thickness 3.5 mm		22 mm		
		PE pipe according to EN 1519-1, EN 12201-2 and EN 12666-1, ABS according to EN 1455-1 and pipes made from SAN+PVC according to EN 1565-1				
		Diameter 32 mm, wall thickness 3.2 mm	Both Sides	25 mm	240	240
		ABS pipe according to EN 1455-1				
		Diameter 36 mm, wall thickness 2.3 mm	Both Sides	23 mm	240	240
Diameter 110 mm, wall thickness 3.5 mm	26 mm					

Penetration Seal: Combustible pipes sealed with 40 mm deep Protecta FR Graphite, to both sides of the wall backed with Protecta FR Board 2S, 50 mm thick. Minimum separation between penetration seals of 200 mm.

All pipe classifications are pipe end configuration U/C and C/C (U=Uncapped, C=Capped)

Protecta FR Graphite: Service Penetration Seals for Cables in Masonry Walls						
Substrate	Minimum Wall Thickness (mm)	Penetrating Services	Seal Position	Seal size (WxH or diameter)	Fire Resistance (mins.)	
					E	EI
Masonry/ Concrete	150	150 x 25 mm perforated steel cable tray	Both Sides	200 x 100 mm	240	180
		20 mm diameter, single copper core armoured cable				
		Twin/earth cable				
		Ø 100 mm bundle of up to 4 no. 20mm diameter, single copper core armoured cable and 12 no. twin/earth cables	Both Sides	150 mm Ø	240	60

Penetration Seal: Cables sealed with 40 mm deep Protecta FR Graphite, to both sides of the wall backed with Protecta FR Board 2S, 50 mm thick. Minimum separation between penetration seals of 200 mm.



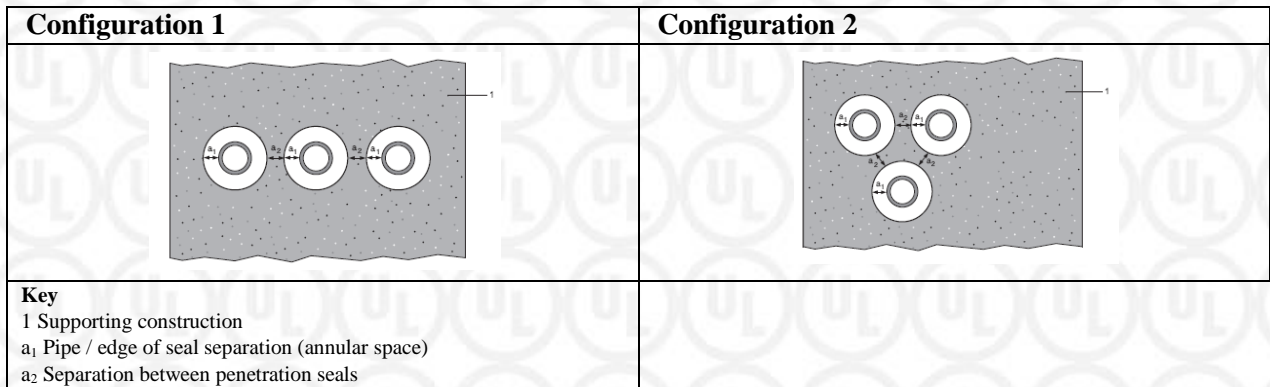
Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00914
 Page 6/7
 Date of Issue 2015-10-09

Protecta FR Graphite: Service Penetration Seals in Concrete Floors								
Substrate	Minimum Floor Thickness (mm)	Penetrating Services	Seal Position	Seal & Backing Width (a ₁)	Permitted Configuration for Seal Separation	Fire Resistance (mins.)		
						E	EI	
Concrete	150	PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1 [^] , PVC-C according to EN 1566-1						
		Diameter 40 mm, wall thickness 1.8 – 3.7 mm	Both Sides	10-30 mm	1 & 2 between PVC-U pipes	240*	240*	
		Diameter 40 mm, wall thickness 1.8 – 3.7 mm to diameter 110 mm, wall thickness 2.7-6.6 mm			1 & 2 between PVC-U pipes & between 40-110 mm Ø PE pipes	90#	90#	
		PE pipe according to EN 1519-1, EN 12201-2 and EN 12666-1 ^s , ABS according to EN 1455-1 and pipes made from SAN+PVC according to EN 1565-1						
		Diameter 40 mm, wall thickness 2.4-3.7 mm	Both Sides	10-30 mm	2 between PE pipes	60*	60*	
		Diameter 40, wall thickness 2.4-3.7 mm to diameter 110 mm, wall thickness 4.3-10 mm			1 & 2 between PE pipes & between 40-110 mm Ø PVC-U pipes	240	240	
		Diameter 110 mm, wall thickness 4.3-10 mm			60	60		
		Diameter 110 mm, wall thickness 10 mm			2 between PE pipes	90	90	
					60*	60*		

Penetration Seal: Combustible pipes sealed with 25 mm deep Protecta FR Graphite, to both sides of the floor backed with Stonewool (35kg/m³ density), 25 mm deep. Minimum separation between penetration seals of 30 mm.

All pipe classifications are pipe end configuration U/C and C/C, with the exception of that marked ‘#’ which is C/U and C/C only. Those marked with ‘*’ also have the additional pipe end configurations of U/U and C/U. (U=Uncapped, C=Capped)



Appendix UL-EU Certificate

Certification Mark	UL-EU mark
Certificate No.	UL-EU-00914
Page	7/7
Date of Issue	2015-10-09

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 Certificate 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.

