UL-EU CERTIFICATE

Certificate No.	UL-EU-00837-A1-CPR
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Date of Issue	2015-09-09
Revision	2021-12-16
Certificate Holder	Astroflame Fireseals LTD Unit 8, I.O Centre, Stephenson Road, Segensworth, Fareham, PO15 5RU
Manufacturer	A/008
Certified Product Type	Fire Stop – Sealant
Product Trade Name	Astro HPE Sealant
Trademark	N/A
Rating/Classification	See Appendix
Harmonised Technical Specifications	ETAG 026-2 / EN 13501-2
Expiry date	2025-07-01

UL EU

UKAS PRODUCT CERTIFICATION 4705

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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.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

This certificate relates to the use of Astro HPE Sealant for fire stopping where services penetrate floors and walls. The detailed scope is given in pages 3 to 7 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 240 minutes (EI 240).

The product is certificated on the basis of:

i) Inspection and surveillance of factory production control by UL
ii) Fire resistance test data in accordance with 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 ASTRO HPE SEALANT is Z_1 - intended for use at internal conditions with high humidity, excluding temperatures below 0°C

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Product-type: Sealant (reactive)	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 F
EN 13501-2	Resistance to fire	See page 5
BWR 3 Hygiene, health and environment		
EN 1026:2000	Air permeability (material property)	See page 4
ETAG 026-3, 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	Rw ($C;C_{tr}$)= 52(-1;-6)
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	Z_1
BWR 7 Sustainable use of natural resources		
-	-	No performance determined

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Astro HPE Sealant: Air Permeability according to BS EN 1314-1				
Pressure (Pa)	**Results under positive chamber pressure**		**Results under negative chamber pressure**	
	Leakage (m^3/h)	**Leakage ($m^3/m^2/h$)**	**Leakage (m^3/h)**	**Leakage ($m^3/m^2/h$)**
50	0.2	5.6	0.3	8.3
100	0.4	11.1	0.6	16.7
150	0.7	19.4	0.9	25.0
200	1.0	27.8	1.2	33.3
250	1.1	30.6	1.6	44.4
300	1.2	33.3	1.9	52.8
450	2.2	61.1	2.7	75.0
600	2.4	66.7	3.4	94.4

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Substrate	Minimum Substrate Thickness (mm)	Seal annulus (mm)	Seal Position	Minimum Seal Depth (mm)	Backing Material	Service/insulation	Fire Resistance (mins.)	
							E	EI
Drywall/ Masonry/ Concrete wall	120	10	Both sides	25	None	40 mm diameter PVC Pipe with 1.9-3mm wall thickness	120	120
		16			Rock fibre mineral wool 30 mm deep and 80 kg/m^3	125 mm diameter PVC Pipe with 4.8-7.4mm wall thickness		
		300 x 100 (seal size)			None	63 mm diameter HDPE Pipe with 7.2mm wall thickness		
						Electrical cables up to 21 mm diameter		
		12.5				90 mm diameter HDPE Pipe with 9.2mm wall thickness		
						90 mm diameter ABS Pipe with 6mm wall thickness		
		20				60 mm diameter Copper or Steel pipe with 0.8-14.2 mm wall thickness and insulated with 32 mm Armaflex AF*	120	90
		15				15 mm diameter Copper or Steel pipe with 0.8-7 mm wall thickness and insulated with 13 mm Armaflex AF*	120	120
	100	20		25		40 mm diameter PVC Pipe with 1.9mm wall thickness		
						125 mm diameter PVC Pipe with 9.2mm wall thickness	60	60
						40 mm diameter ABS Pipe with 1.9mm wall thickness	120	120
						40 mm diameter HDPP Pipe with 2mm wall thickness		
						40 mm diameter Copper or Steel pipe with 1.5-14.2 mm wall thickness and insulated with 32 mm Armaflex AF**	120	30
						40-159 mm diameter Copper or Steel pipe with 2.0-14.2 mm wall thickness and insulated with 32 mm Armaflex AF**		
						159 mm diameter Copper or Steel pipe with 2.0-14.2 mm wall thickness and insulated with 30 mm Pipelane SGR glass wool tube (80kg/m^3) **		

* Continuous through seal and full length of the pipe (CS)
** Continuous through seal and extending minimum 650 mm from both faces of the seal (LS)

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Substrate	Minimum Substrate Thickness (mm)	Seal annulus (mm)	Seal Position	Minimum Seal Depth (mm)	Backing Material	Service/insulation	Fire Resistance (mins.)	
							E	EI
Concrete floor	150	50 x 50 – 200 x 200 (seal size)	Upper face	25	Rock fibre mineral wool 100 mm deep and 45 kg/m^3	Electrical cables up to 21 mm diameter	180	120
						Electrical cables 22 to 80 mm diameter	120	120
						Non-sheathed electrical cables up to 24 mm diameter	180	15
						Telecomms cables up to 21 mm diameter (bundles up to 100 mm diameter)	180	20
		20				41-159 mm diameter Copper or Steel pipe with 2.5-14.2 mm wall thickness and insulated with 16-32 mm Armaflex AF*	120	120
						50-110 mm diameter PP Pipe with 2.1 to 10.7 mm wall thickness	30	30
						50 mm diameter PP Pipe with 2.1mm wall thickness	240	240
						110 mm diameter PP Pipe with 10.7 mm wall thickness	120	120
						40-125 mm diameter PE Pipe with 4.1 to 11.4 mm wall thickness	60	60
						40 mm diameter PE Pipe with 4.1 mm wall thickness	240	240
						125 mm diameter PE Pipe with 11.4 mm wall thickness	90	90
						40-114 mm diameter PVC Pipe with 2.0 to 8.1 mm wall thickness	90	30
						40 mm diameter PVC Pipe with 2.0 mm wall thickness	240	240
						114 mm diameter PVC Pipe with 8.1 mm wall thickness	120	120

* Continuous through seal and full length of the pipe (CS)

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.