

UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
Page 1/13
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 – Pillows
Product Trade Name Astro X Series Pillow
Trademark N/A
Rating/Classification See Appendix

Harmonised Technical Specifications ETAG 026-2 / EN 13501-2
Expiry date 2025-07-01



A handwritten signature in blue ink, appearing to read 'Chris Miles', is written over a horizontal line.

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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.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

Certificate No. UL-EU-00840-A1-CPR
Page 2/13
Date of Issue 2015-09-09

This certificate relates to the use of Astro X Series Pillow for fire stopping where services pass through flexible or rigid walls. The detailed scope is given in pages 3 to 12 of this Certificate. This shows the thickness and acceptable dimensions, substrates, services and orientations required to provide fire resistance periods of up to 120 minutes.

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 X Series Pillow is Z₁ - intended for use at internal conditions with high humidity, excluding temperatures below 0°C



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 3/13
 Date of Issue 2015-09-09

Product-type: Pillow		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 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	$R_w(C;Ctr) = 33 (0;-2)$ dB	
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	



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
Page 4/13
Date of Issue 2015-09-09

Astro X Series Pillow: 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	2.5	13.9	3.1	17.2
100	4.1	22.8	5.6	31.1
150	5.8	32.2	7.4	41.1
200	7.2	40.0	8.9	49.4
250	8.7	48.3	10.3	57.2
300	9.8	54.4	11.1	61.7
450	13.4	74.4	15.3	85.0
600	17.5	97.2	18.6	103.3



Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 5/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Acoustic performance according to BS EN ISO 10140-2:2010		
Configuration	$R_w(C; C_{tr})$ Specimen only, 1m ²	D_{new} Partition & Specimen
500mm wide x 2000mm high, aperture filled with 114 No. Astro X Series Pillow	30 (0; -2)	43 (0; -2)

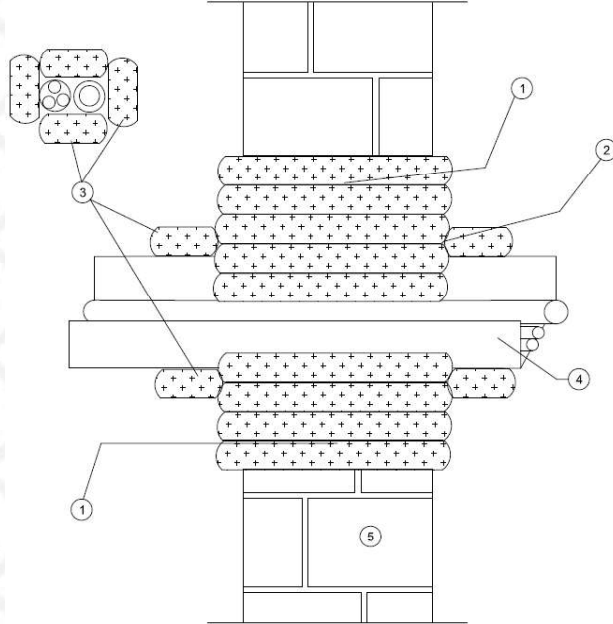


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 6/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (cables)

ASTRO X SERIES PILLOWS FIRE RESISTANT CABLE & CABLE TRAY
 PENETRATION SEAL WITH ADDITIONAL PILLOWS THROUGH RIGID WALL
 HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ASTRO X SERIES PILLOWS - VARIOUS SIZES TO FIT VOID
- 3 - ADDITIONAL ASTRO X SERIES PILLOWS
- 4 - CABLE TRAY AND CABLES
- 5 - RIGID WALL CONSTRUCTION

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with additional 300 mm long pillows where they exit the seal)	Fire Resistance (mins.)	
						E	EI
Masonry/ Concrete	150	1100 x 1100	Central	300*	Telecom cables up to 21 mm Ø (single or in bundles up to 100 mm Ø)	120	120
					Electrical cables up to 21 mm Ø		
					Electrical cables up to 80 mm Ø	120	60
					Unsheathed wires up to 24 mm Ø		
					Plastic conduits and tubes up to 16 mm Ø	120	120
					Steel, copper conduits and tubes up to 16 mm Ø		
					Cable trays or ladders up to 300 mm wide	120	60
Cable trays up to 500 mm wide							

* with equal projection to both faces

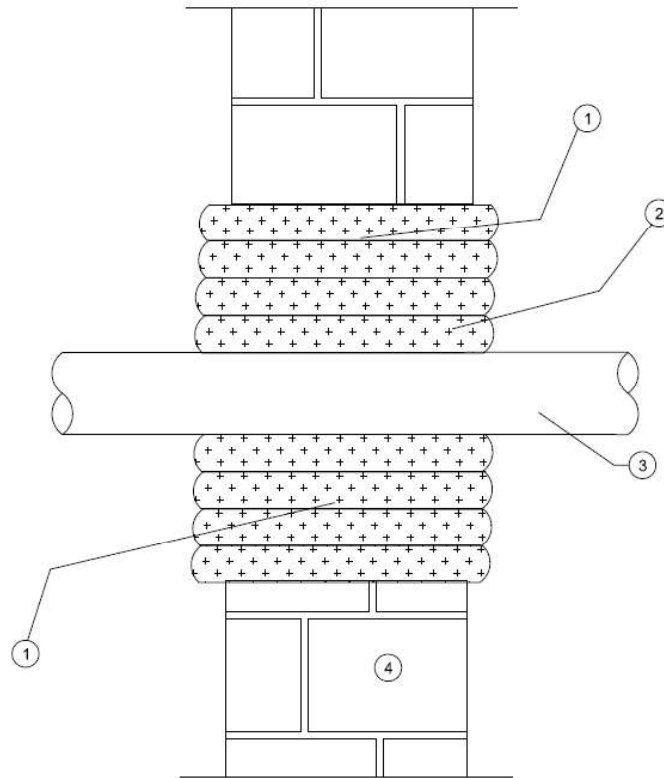


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 7/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (uninsulated metal pipes)

ASTRO X SERIES PILLOWS FIRE RESISTANT UN-INSULATED METALLIC PIPE
 PENETRATION SEAL THROUGH RIGID WALL HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ASTRO X SERIES PILLOWS - VARIOUS SIZES TO FIT VOID
- 3 - UN-INSULATED METALLIC PIPE - COPPER / STEEL
- 4 - RIGID WALL CONSTRUCTION

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services	Fire Resistance (mins.) [^]	
						E	EI
Masonry/ Concrete	150	1100 x 1100	Central	300*	165 mm Ø by 5.6-14.2 mm thick walled mild steel pipe	120	0

* with equal projection to both faces

[^] C/U pipe end configuration

Form-ULID-006104 (DCS:27-CP-F0855) 5.0

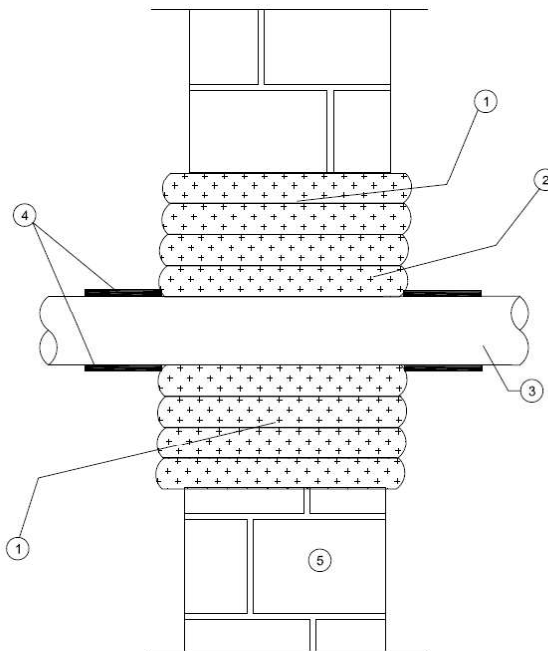


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 8/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (local interrupted insulated metal pipes)

ASTRO X SERIES PILLOWS FIRE RESISTANT METALLIC PIPE PENETRATION
 SEAL WITH TDW THROUGH RIGID WALL HORIZONTAL
 ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ASTRO X SERIES PILLOWS - VARIOUS SIZES TO FIT VOID
- 3 - METALLIC PIPE - COPPER / STEEL
- 4 - ASTRO THERMAL DEFENSE WRAP - TDW 300mm - LI
- 5 - RIGID WALL CONSTRUCTION

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with 300 mm long Thermal Defense Wrap where they exit the seal)	Fire Resistance (mins.) [^]	
						E	EI
Masonry/ Concrete	150	1100 x 1100	Central	300*	48 mm Ø by 3.5-14.2 mm thick walled mild steel pipe (7 mm Astro Thermal Defense Wrap)	120	120
					113 mm Ø by 4.5-14.2 mm thick walled mild steel pipe (10 mm Astro Thermal Defense Wrap)		

* with equal projection to both faces

[^] C/U pipe end configuration

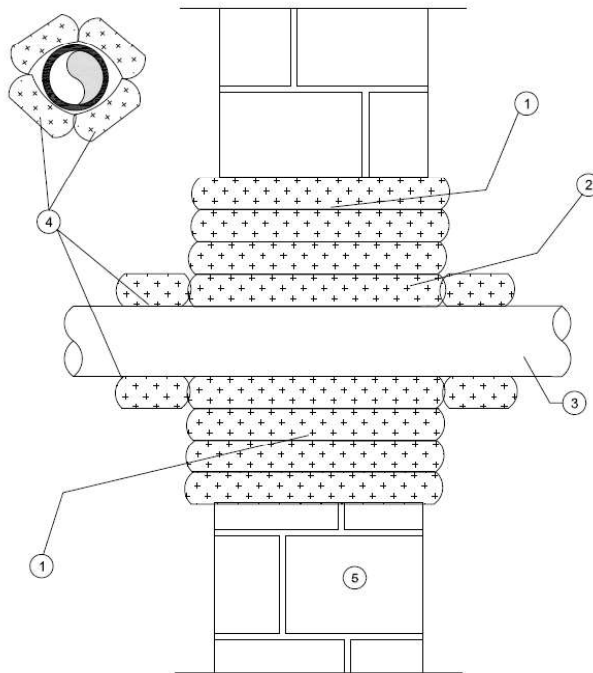


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 9/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (local interrupted insulated metal pipes)

ASTRO X SERIES PILLOWS FIRE RESISTANT METALLIC PIPE PENETRATION
 SEAL WITH ADDITIONAL PILLOWS THROUGH RIGID WALL
 HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ASTRO X SERIES PILLOWS - VARIOUS SIZES TO FIT VOID
- 3 - METALLIC PIPE - COPPER / STEEL
- 4 - ADDITIONAL ASTRO X SERIES PILLOWS - LI
- 5 - RIGID WALL CONSTRUCTION

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with additional 300 mm long pillows where they exit the seal)	Fire Resistance (mins.) [^]	
						E	EI
Masonry/ Concrete	150	1100 x 1100	Central	300*	108 mm Ø by 1.5-14.2 mm thick walled copper pipe	120	90

* with equal projection to both faces

[^] C/U pipe end configuration

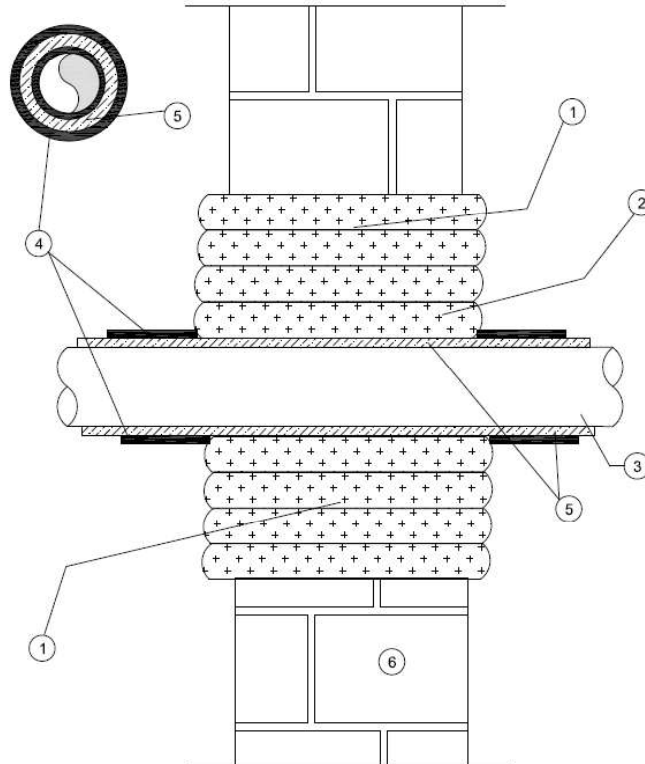


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 10/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (insulated metal pipes)

ASTRO X SERIES PILLOWS FIRE RESISTANT INSULATED WITH ARMAFLEX
 METALLIC PIPE PENETRATION SEAL WITH TDW THROUGH RIGID
 WALL HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ASTRO X SERIES PILLOWS - VARIOUS SIZES TO FIT VOID
- 3 - METALLIC PIPE - COPPER / STEEL
- 4 - ASTRO THERMAL DEFENSE WRAP - TDW 300mm - LI (Local Interrupted)
- 5 - ARMAFLEX INSULATION - LS (Local Sustained)
- 6 - RIGID WALL CONSTRUCTION

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with 250 mm long Astro Thermal Defense Wrap where they exit the seal)	Fire Resistance (mins.) [^]	
						E	EI
Masonry/ Concrete	150	1100 x 1100	Central	300*	54 mm Ø by 1.0-14.2 mm thick walled copper pipe with 15 mm thick Armaflex AF insulation continuous through the seal and extending at least 400 mm to each face (2x layers of 100 mm Astro Thermal Defense Wrap)	120	120

* with equal projection to both faces

[^] C/U pipe end configuration

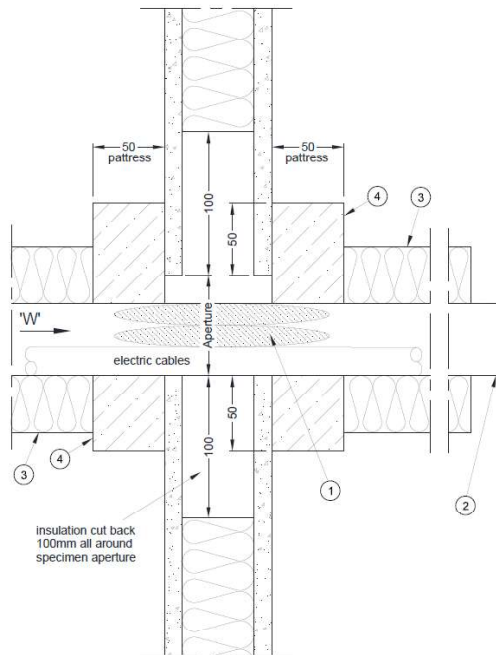


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 11/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (locally insulated electrical cables and cable trunking)

ASTRO X SERIES PILLOWS FIRE RESISTANT ELECTRIC TRUNKING AND ELECTRIC CABLE PENETRATION SEAL WITH ROCK FIBRE INSULATION THROUGH SINGLE LAYER PATTRISS ASTRO BATT AND COATING 50mm, IN FLEXIBLE OR RIGID WALL HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ELECTRICAL TRUNKING CONTAINING 3No. ELECTRIC CABLES
- 3 - ROCK FIBRE INSULATION - 400mm - LI (Local Interrupted)
- 4 - ASTRO BATT AND COATING PATTRISS

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with 400 mm long rock fibre insulation where they exit the seal)	Fire Resistance (mins.) [^]	
						E	EI
Drywall/ Masonry/ Concrete	75	70 x 70	Central	300*	50mm x 50mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m ³ (LI 400mm). Astro X Series Pillow tightly fitted around the cables in the section of trunking within the depth of the partition.	60	60
					Cables 1xA1, 1xA2, 1xA3	60	60
					Cables 1xA1		
					Cables 1xA2		
Cables 1xA3							

* with equal projection to both faces
[^] U/U pipe end configuration

¹Pattress installation of Astro Batt and Coating. The Batts are installed in horizontal rows, bedded onto the partition using Astro into mastic and fixed in minimum two vertical edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 70mm steel screws and steel retaining washer.

Form-ULID-006104 (DCS:27-CP-F0855) 5.0

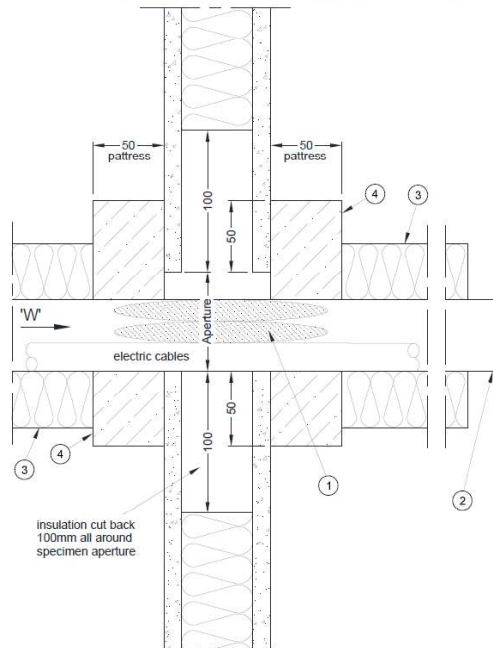


Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-00840-A1-CPR
 Page 12/13
 Date of Issue 2015-09-09

Astro X Series Pillow: Penetration Seals in Walls (locally insulated electrical cables and cable trunking)

ASTRO X SERIES PILLOWS FIRE RESISTANT ELECTRIC TRUNKING AND ELECTRIC CABLE PENETRATION SEAL WITH ROCK FIBRE INSULATION THROUGH SINGLE LAYER PATTRESS ASTRO BATT AND COATING 50mm, IN FLEXIBLE OR RIGID WALL HORIZONTAL ORIENTATION



- 1 - ASTRO X SERIES PILLOWS
- 2 - ELECTRICAL TRUNKING CONTAINING 3No. ELECTRIC CABLES
- 3 - ROCK FIBRE INSULATION - 400mm - LI (Local Interrupted)
- 4 - ASTRO BATT AND COATING PATTRESS

Substrate	Minimum Substrate Thickness (mm)	Maximum Seal Size (mm)	Seal Position	Minimum Seal Depth (mm)	Services (wrapped with 400 mm long rock fibre insulation where they exit the seal)	Fire Resistance (mins.) [^]	
						E	EI
Drywall/ Masonry/ Concrete	75	170 x 170	Central	300*	150mm x 150mm Insulated steel cable trunking, Stone Wool 40mm thick, 45kg/m ³ (LI 400mm). Astro X Series Pillow tightly fitted around the cables in the section of trunking within the depth of the partition.	60	60
					Cables 1xB, 1xC1, 1xG2, 1x G3	60	60
					Cables 1xB		
					Cables 1xC1		
					Cables 1xG1		
					Cables 1xG2		

* with equal projection to both faces

[^] U/U pipe end configuration

^lPattress installation of Astro Batt and Coating. The Batts are installed in horizontal rows, bedded onto the partition using Astro into mastic and fixed in minimum two vertical edges. Overlap of batts to substrate min 50mm. Batts mechanically fixed to substrate with min 6mm x 70mm steel screws and steel retaining washer.

Form-ULID-006104 (DCS:27-CP-F0855) 5.0



Appendix UL-EU Certificate

Certification Mark	UL-EU mark
Certificate No.	UL-EU-00840-A1-CPR
Page	13/13
Date of Issue	2015-09-09

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 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.

Form-ULID-006104 (DCS:27-CP-F0855) 5.0

