

UL-EU CERTIFICATE

Certificate No.
UL-EU-00643-EN

Issue date
21-04-2015

Issue No.
3

Re-Issue date
22-08-2025

Expiry date
14-08-2035



4705

Certificate Holder:
Neutron Fire Technologies Limited

Address:
Broomfield Industrial Estate,
Broomfield Road,
Montrose
DD10 8SY

Product:
Firebreak Compound

Places of production:
A/002

Standard:
EAD 350454-00-1104, September 2017 / EN 13501-2

Authorised Signatory:

A handwritten signature in blue ink, appearing to read 'Chris Johnson'.

Chris Johnson
Issued by UL International (UK) Ltd

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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.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 UL-EU-00643-EN

This certificate relates to the use of Firebreak Compound for fire stopping where there are service penetrations through floors and walls. The detailed scope is given in pages 3 to 11 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 product is certificated on the basis of:

- i) 0843-UKTA-240013
- ii) UK – CERTIFICATE OF CONSTANCY OF PERFORMANCE 0843 – CPR – 1363
- iii) Inspection and surveillance of factory production control by UL
- iv) Fire resistance test data in accordance with EN 1366-3: 2009
- v) Classification in accordance with EN 13501-2
- vi) Durability and Servicability as defined in EAD 350454-00-1104, September 2017

* Firebreak Compound has demonstrated its suitability for use in internal conditions, including temperatures below 0°C, without exposure to rain or UV. These conditions are designated Y₂, Z₁ & Z₂ in EAD 350454-00-1104, September 2017.



Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Product-type: Pipe closures		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product Performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class A1
EN 13501-2	Resistance to fire	See pages 4 to 11
BWR 3 Hygiene, health and environment		
EN 1026	Air permeability	No performance determined
EAD 350454-00-1104, Annex C	Water permeability	No performance determined
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W2 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
EAD 350454-00-1104, Clause 2.2.9	Durability	Y ₂
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
BWR 6 Energy economy and heat retention		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 14683, EN ISO 10211, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined



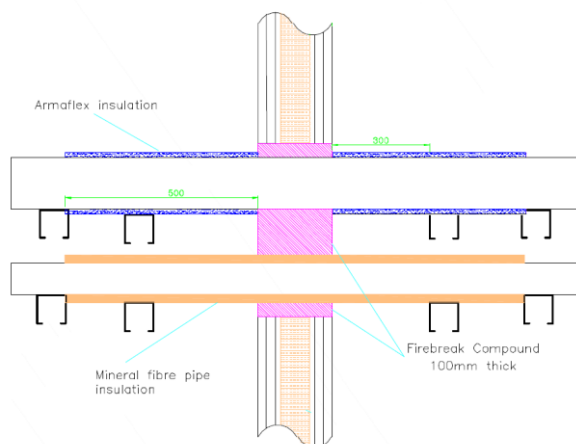
Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Flexible or rigid wall constructions with wall thickness of minimum 100 mm

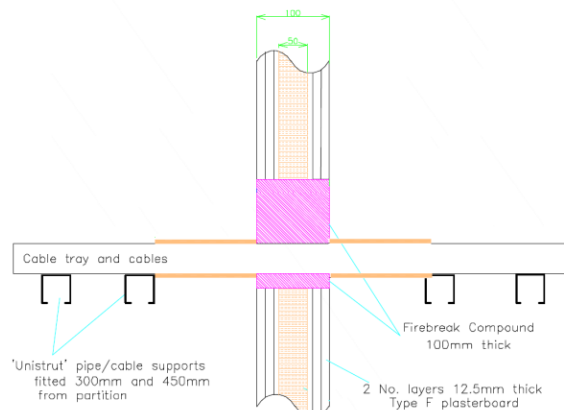
Firebreak Compound penetration seal in flexible or rigid walls min. 100 mm thick

Penetration Seal: Metallic pipes (insulated and un-insulated) and various cables (insulated and un-insulated) penetrating through a flexible or rigid wall construction. Firebreak Compound installed centrally within the wall to full depth. Firebreak Compound is applied to seal around the services and gaps of service penetration.

Construction details:



Construction details:



Services	Armaflex Nitrile Rubber Service Insulation	Classification
Copper pipe 22-38 mm Ø, 1 – 14.2mm wall	19 mm x 500 mm (LI)	EI 120 C/U
Copper pipe 93 mmØ, 1.6 – 14.2mm wall	25 mm x 500 mm (LI)	
Steel pipe 19mm Ø, 1.2 – 14.2mm wall	19 mm x 500 mm (LI)	
Steel pipe 38mm Ø, 1.2 – 14.2mm wall	25 mm x 500 mm (LI)	
Steel pipe 193.7mm Ø, 1.2 – 14.2mm wall	25 mm x 500 mm (LI)	E 120 C/U, EI 60 C/U
Steel pipe 193.7mm Ø, 1.2 – 14.2mm wall	25 mm (CI)	E 120 C/U, EI 90 C/U
Copper pipe 22 mm Ø, 1 – 14.2mm wall	None	E 120 C/U, EI 90 C/U
Copper pipe 38 mm Ø, 1.2 – 14.2mm wall	None	E 120 C/U, EI 15 C/U
Copper pipe 93 mmØ, 1.6 – 14.2mm wall	None	E 120 C/U, EI 30 C/U
Steel pipe 19mm Ø, 1.2 – 14.2mm wall	None	EI 120 C/U
Steel pipe 38mm Ø, 1.2 – 14.2mm wall	None	E 120 C/U, EI 60 C/U
Steel pipe 193.7mm Ø, 1.2 – 14.2mm wall	None	E 120 C/U, EI 15 C/U

Services	Rock Mineral Wool Service Insulation	Classification
Copper pipe 22-93 mm Ø, 1 – 14.2mm wall	25 mm (CI)	EI 120 C/U

'CI' = continued interrupted

'LI' = local interrupted

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Services	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
Electrical cables up to 21 mm diameter	None	E 120, EI 60
Electrical cables up to 80 mm diameter	None	E 120, EI 45
Electrical cables up to 80 mm diameter	5mm thick by 300mm long	EI 120
Steel cable trays up to 150 x 50 x 1.5 mm	None	E 120, EI 60
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter	5mm thick by 300mm long	EI 120
Non-sheathed wire up to 24 mm Ø		
Steel cable trays up to 300 x 25 x 1.5 mm		
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter	None	EI 120
Non-sheathed wire up to 24 mm Ø		E 120, EI 90
Steel cable trays up to 300 x 25 x 1.5 mm		EI 120

'CI' = continued interrupted

'LI' = local interrupted

Specific Cables*	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
C1, C2, C3 electrical cables	None	E 240, EI 60
A1, A2, A3, D3 electrical cables		E 240, EI 90
D1, D2 electrical cables		E 240, EI 120

* As defined in EN 1366-3: 2009



Solutions

Form-ULID-006104 V8.0

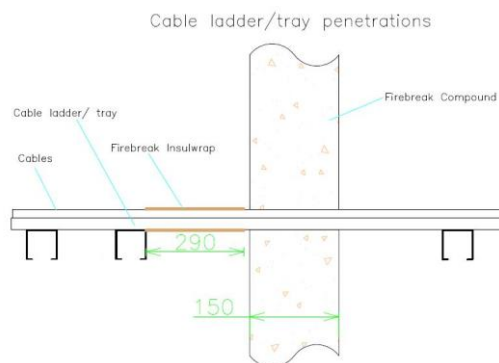
Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Rigid wall constructions with wall thickness of minimum 150 mm

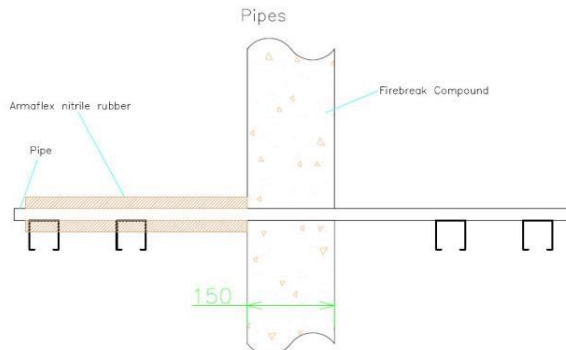
Firebreak Compound penetration seal in rigid walls min. 150 mm thick

Penetration Seal: Metallic pipes (insulated and un-insulated) and various cables (insulated and un-insulated) penetrating through a rigid wall construction. Firebreak Compound installed centrally within the wall to full depth. Firebreak Compound is applied to seal around the services and gaps of service penetration.

Construction details:



Construction details:



Services	Armaflex Nitrile Rubber Service Insulation	Classification
Steel pipe 38mm Ø, 1.9 – 14.2mm wall	25 mm (CI)	EI 240 C/U
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		
Copper pipe 22mm Ø, 1 – 9mm wall	20 mm (CI)	
Copper pipe 42 mm Ø, 1.2 – 14.2mm wall	25 mm (CI)	
Copper pipe 42 - 89mm Ø, 1.6 – 14.2mm wall,		E 240 C/U, EI 90 C/U
Steel pipe 19mm Ø, 1.2 – 9mm wall	20 mm by 500 mm (LI)	EI 240 C/U
Steel pipe 38mm Ø, 1.9 – 14.2mm wall	25 mm by 500 mm (LI)	E 240 C/U, EI 30 C/U
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		
Copper pipe 22mm Ø, 1 – 9mm wall	20 mm by 500 mm (LI)	E 240 C/U, EI 120 C/U
Copper pipe 42mm Ø, 1.2 – 14.2mm wall	25 mm by 500 mm (LI)	
Copper pipe 42 - 89mm Ø, 1.6 – 14.2mm wall		E 240 C/U, EI 60 C/U
Steel pipe 19mm Ø, 1.2 – 9mm wall	20 mm by 500 mm (LI)	EI 240 C/U

'CI' = continued interrupted

'LI' = local interrupted



Solutions

Form-ULID-006104 V8.0

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Services	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
Steel pipe 38mm Ø, 1.9 – 14.2mm wall	None	E 240 C/U, EI 180 C/U
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		E 240 C/U, EI 15 C/U
Copper pipe 22mm Ø, 1 – 9mm wall		E 240 C/U, EI 90 C/U
Electrical cables up to 21 mm Ø		E 240, EI 60
Electrical cables up to 80 mm Ø		E 240, EI 45
Non-sheathed wire up to 17 mm Ø		E 240, EI 60
Non-sheathed wire 18-24 mm Ø		E 240, EI 45
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter		E 180, EI 120
Electrical cables up to 21 mm Ø	5mm thick by 300mm long	E 240, EI 120
Electrical cables up to 80 mm Ø		E 240, EI 90
Non-sheathed wire up to 17 mm Ø		EI 240,
Non-sheathed wire 18-24 mm Ø		E 240, EI 180
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter		E 180, EI 120

'CI' = continued interrupted

'LI' = local interrupted

Specific Cables*	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
C1, C3, D1, D3 electrical cables	None	E 240, EI 60
C2 electrical cables		E 240, EI 90
A1, A2, A3, D2 electrical cables		E 240, EI 120
C2, D1, D3 electrical cables	5mm thick by 300mm long	E 240, EI 120
C3 electrical cables		E 240, EI 180
A1, A2, A3, D2 electrical cables		EI 240

* as defined in EN 1366-3: 2009



Solutions

Form-ULID-006104 V8.0

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Rigid floor constructions with wall thickness of minimum 150 mm

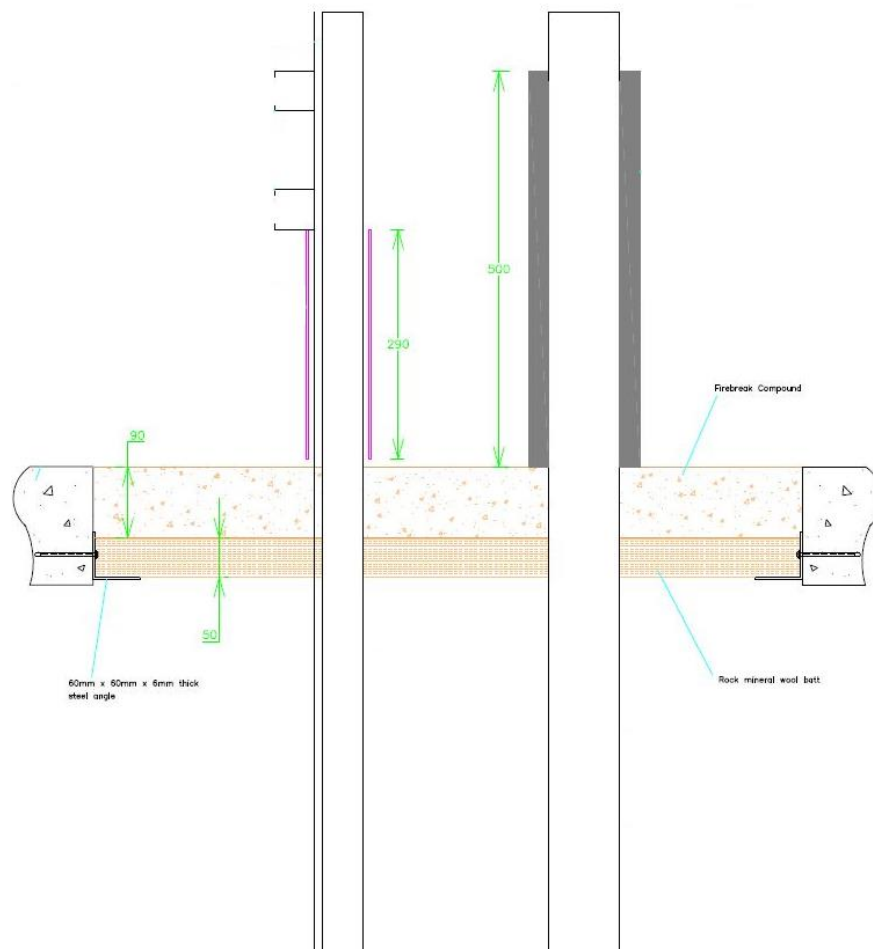
Firebreak Compound penetration seal in rigid floors min. 150 mm thick

Penetration Seal: Metallic pipes (insulated and un-insulated) and various cables (insulated and un-insulated) penetrating through a rigid floor construction. Firebreak Compound installed flush to the top of the floor and to a minimum 90 mm depth, maximum seal size 1400 x 1200 mm.

A steel support and mineral fibre board structure is installed as a shutter and a structural support for the Firebreak Compound seal

Firebreak Compound is poured around the services and gaps of service penetration

Construction details:



Solutions

Form-ULID-006104 V8.0

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Services	Armaflex Nitrile Rubber Service Insulation	Classification
Steel pipe 19mm Ø, 1.2 – 9mm wall	20 mm (CI)	E 240 C/U, EI 180 C/U
Steel pipe 38mm Ø, 1.9 – 14.2mm wall	25 mm (CI)	
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		
Copper pipe 22mm Ø, 1 – 9mm wall	20 mm (CI)	EI 240 C/U
Copper pipe 42mm Ø, 1.6 – 14.2mm wall	25 mm (CI)	E 240 C/U, EI 60 C/U
Copper pipe 42 - 89mm Ø, 1.6 – 14.2mm wall		
Steel pipe 19mm Ø, 1.2 – 9mm wall	20 mm by 500 mm (LI)	E 240 C/U, EI 180 C/U
Steel pipe 38mm Ø, 1.9 – 14.2mm wall	25 mm by 500 mm (LI)	E 240 C/U, EI 60 C/U
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		
Copper pipe 22mm Ø, 1 – 9mm wall	20 mm by 500 mm (LI)	E 240 C/U, EI 45 C/U
Copper pipe 42 mm Ø, 1.6 – 14.2mm wall	25 mm by 500 mm (LI)	EI 240 C/U
Copper pipe 42 - 89mm Ø, 1.6 – 14.2mm wall		E 240 C/U, EI 30 C/U
Steel pipe 19mm Ø, 1.2 – 9mm wall	None	E 240 C/U, EI 15 C/U
Steel pipe 38 - 194mm Ø, 5 – 14.2mm wall		EI 240 C/U
Copper pipe 22mm Ø, 1 – 9mm wall		E 240 C/U, EI 90 C/U
Copper pipe 42mm Ø, 1.6 – 14.2mm wall		E 240 C/U, EI 15 C/U
Copper pipe 42 - 89mm Ø, 1.6 – 14.2mm wall		E 240, EI 90
Electrical cables up to 21 mm Ø		E 240, EI 60
Electrical cables up to 80 mm Ø		E 240, EI 30
Non-sheathed wire up to 24 mm Ø		E 240, EI 60
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter		
Services		Insulwrap Aluminium Foil Face Insulation (LI)
Electrical cables up to 21 mm Ø	5mm thick by 300mm long	E 240, EI 120
Electrical cables up to 80 mm Ø		E 240, EI 90
Non-sheathed wire up to 24 mm Ø		E 120, EI 60
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter		E 120, EI 90
Steel or Copper conduits and tubes up to 16 mm Ø	None	E 120, EI 15
Plastic (any) conduits and tubes up to 16 mm Ø		E 90, EI 15

'CI' = continued interrupted

'LI' = local interrupted

Specific Cables*	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
A2 electrical cables	None	E 240, EI 120
A1, A2, A3, D2 electrical cables	5mm thick by 300mm long	E 240, EI 120

* As defined in EN 1366-3: 2009



Solutions

Form-ULID-006104 V8.0

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

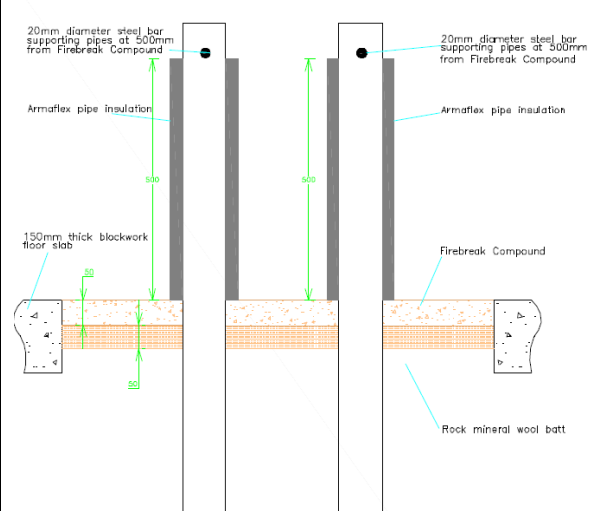
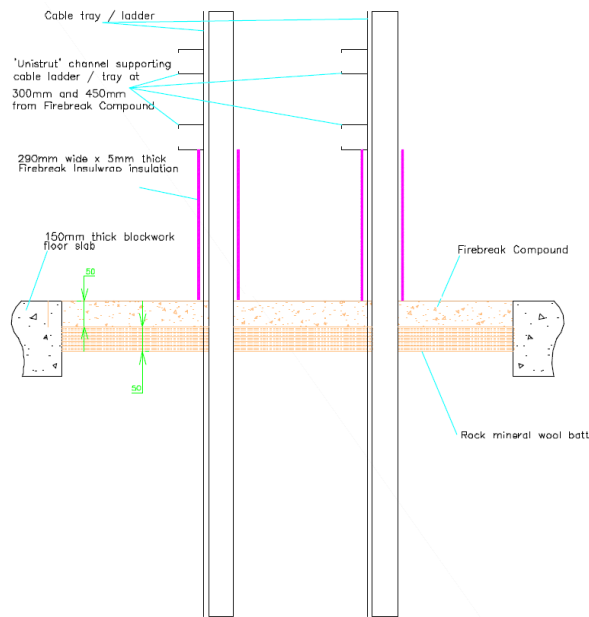
Firebreak Compound penetration seal in rigid floors min. 150 mm thick

Penetration Seal: Metallic pipes (insulated and un-insulated) and various cables (insulated and un-insulated) penetrating through a rigid floor construction. Firebreak Compound installed flush to the top of the floor and to a minimum 50 mm depth, maximum seal size 700 x 600 mm.

A mineral fibre board structure is installed as a shutter and a structural support for the Firebreak Compound seal

Firebreak Compound is poured around the services and gaps of service penetration

Construction details:



Appendix UL-EU CERTIFICATE UL-EU-00643-EN

Services	Armaflex Nitrile Rubber Service Insulation (optional top face only)	Classification
Steel pipe 19mm Ø, 1.0 – 14.2mm wall	19 mm by 500 mm (LI)	EI 120 C/U
Steel pipe 40mm Ø, 1.2 – 14.2mm wall	25 mm by 500 mm (LI)	E 120 C/U, EI 30 C/U
Steel pipe 194mm Ø, 8.0 – 14.2mm wall	19 mm by 500 mm (LI)	EI 120 C/U
Copper pipe 22mm Ø, 1 – 9mm wall	25 mm by 500 mm (LI)	E 120 C/U, EI 30 C/U
Copper pipe 42mm Ø, 1.2 – 14.2mm wall	25 mm by 500 mm (LI)	E 120 C/U
Copper pipe 89mm Ø, 1.6 – 14.2mm wall	25 mm by 500 mm (LI)	E 120 C/U, EI 30 C/U
Copper pipe 22-89mm Ø, 1.2 – 14.2mm wall	25 mm by 500 mm (LI)	E 120 C/U
Steel pipe 19mm Ø, 1.0 – 14.2mm wall	None	E 120 C/U, EI 60 C/U
Steel pipe 40mm Ø, 1.2 – 14.2mm wall	None	E 120 C/U, EI 30 C/U
Steel pipe 194mm Ø, 8.0 – 14.2mm wall	None	E 120 C/U, EI 15 C/U
Steel pipe 19mm Ø, 1.0 – 14.2mm wall	19 mm (CI)	EI 120 C/U
Steel pipe 40mm Ø, 1.2 – 14.2mm wall	25 mm (CI)	EI 120 C/U
Steel pipe 194mm Ø, 8.0 – 14.2mm wall	25 mm (CI)	E 120 C/U, EI 30 C/U
Copper pipe 22mm Ø, 1 – 9mm wall	19 mm (CI)	EI 120 C/U
Copper pipe 42mm Ø, 1.2 – 14.2mm wall	25 mm (CI)	EI 120 C/U
Copper pipe 89mm Ø, 1.6 – 14.2mm wall	25 mm (CI)	EI 120 C/U
Services	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
Electrical cables up to 21 mm Ø	5mm thick by 300mm long	E 120, EI 90
Electrical cables up to 80 mm Ø	5mm thick by 300mm long	E 90, EI 60
Non-sheathed wire up to 24 mm Ø	5mm thick by 300mm long	E 120, EI 90
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter	5mm thick by 300mm long	EI 90
Steel ladders and non-perforated trays up to 500 x 60 x 1.5 mm	None	EI 120
Steel perforated trays up to 500 x 60 x 1.5 mm	None	EI 90
Electrical cables up to 21 mm Ø	None	E 120, EI 30
Electrical cables up to 80 mm Ø	None	E 90, EI 15
Non-sheathed wire up to 24 mm Ø	None	E 90, EI 30
Up to 21mm Ø telecomm cables in bundles of up to 100 mm diameter	None	E 90, EI 30

'CI' = continued interrupted

'LI' = local interrupted

Specific Cables*	Insulwrap Aluminium Foil Face Insulation (LI)	Classification
C3, D1, D3 electrical cables	None	E 240, EI 30
C1, C2, D2 electrical cables	None	E 240, EI 60
A1, A3, electrical cables	None	E 240, EI 90
A2 electrical cables	None	E 240, EI 120
B, C1, C2, D1, D3 electrical cables	5mm thick by 300mm long	E 240, EI 90
A1, A2, A3, D2 electrical cables	5mm thick by 300mm long	E 240, EI 120

* As defined in EN 1366-3: 2009



Solutions

Form-ULID-006104 V8.0

Appendix UL-EU CERTIFICATE UL-EU-00643-EN

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.

