

# UL-EU CERTIFICATE

**Certificate No.**  
UL-EU-01301-EN

**Issue date**  
2024-11-18

**Issue No.**  
2

**Re-Issue date**  
2025-12-11

**Expiry date**  
2034-11-17



4705

**This is to acknowledge that:**  
Triton Middle East LLC

**Address:**  
PO Box 3350  
New Sanaya Industrial Area  
Umm AL Quwain  
United Arab Emirates

**Has had the product:**  
HEATSHIELD S550

evaluated and meets the requirements of the standard(s):

EAD 350454-00-1104, September 2017  
EAD 350141-00-1106, September 2017

**Places of production:**  
U/003

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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.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-01301-EN

This certificate relates to the use of HEATSHIELD S550, is a fire-resistant sealant used to form linear gap seals where gaps are present in wall and floor constructions and to form a penetration seal around metallic pipes, combustible cable conduits and electrical cables to reinstate the fire resistance performance of wall and floor constructions, where they have been provided with apertures for the penetration of services.

The detailed scope is given in pages 4 to 13 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 120 minutes (EI 120) for penetration seals and up to 240 minutes (EI 240) for linear gap seals.

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 EN 1366-3:2021 and EN 1366-4:2021
- iii) Classification in accordance with EN 13501-2:2016
- iv) Durability and Serviceability as defined in EAD 350454-00-1104, September 2017 and EAD 350141-00-1106, September 2017.

According to EN 1366-3: 2021+A1: 2024, Clause H.4.1.8.6.2, the following end uses are envisaged\* based upon the tested pipe end configuration:

Pipe material	Tested pipe end	Envisaged use scenario
Metal	C/U or C/C	Closed pipe systems (e.g. systems under pressure)
	U/U, U/C or C/U	Ventilated pipe systems (e.g. sewage pipes) and for closed pipe systems
Plastic	U/U or C/U	Ventilated pipe systems and for closed pipe systems
	U/U	Ventilated pipe systems, for rainwater systems and for closed pipe systems

\* In the case where a national prescription is in conflict with the content of the table above, the national prescriptions prevail.

According to EN 13501-2: 2023, Clause 7.5.8.4, the following classification codes are defined in addition E & EI:

Test conditions	Designation
Specimen orientation	
- Horizontal supporting construction	H
- Vertical supporting construction – vertical joint	V
- Vertical supporting construction – horizontal joint	T
Movement capability	
- No movement	X
- Movement induced lateral (in%)	M <sub>lat</sub> 000
- Movement induced lateral (in%)	M <sub>shear</sub> 000
Type of splices	
- Manufactured	M
- Field	F
- Both manufactured and field	B
Joint widths range (in mm)	W w1 to w2
e.g. EI 30 – H – M <sub>lat</sub> 30 – B – W 30 to W 90	



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## Performance of the product and references to the methods used for its assessment

Product-type: Sealant		Intended use: Linear Joint & Gap Seal; Penetration Seal
Basic requirement for construction work	Essential characteristic	Performance
<b>BWR 2 Safety in case of fire</b>		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	Annex A
<b>BWR 3 Hygiene, health and the environment</b>		
Declaration of manufacturer & EN 16516	Content, emission and/or release of dangerous substances	Use categories: IA1, S/W2 Declaration of manufacturer
EN 1026:2000	Air permeability (material property)	No performance determined
EAD 350141-00-1106, Annex C & EN 12390-8	Water permeability (material property)	No performance determined
<b>BWR 4 Safety and accessibility in use</b>		
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 & EAD 350141-00-1106, Clause 2.2.13	Adhesion	No performance determined
EAD 350141-00-1106, Clause 2.2.12 / EAD 350454-00-1104, Clause 2.2.9	Durability	Z <sub>1</sub>
EAD 350141-00-1106, Clause 2.2.13	Movement capacity	No performance determined
EAD 350141-00-1106, Clause 2.2.14	Cycling of perimeter seals for curtain walls	No performance determined
EAD 350141-00-1106, Clause 2.2.15	Compression set	No performance determined
EAD 350141-00-1106, Clause 2.2.16	Linear expansion on setting	No performance determined
<b>BWR 5 Protection against noise</b>		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	No performance determined
<b>BWR 6 Energy economy and heat retention</b>		
EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 10456	Thermal properties	No performance determined
EN ISO 12572, EN 12086, EN ISO 10456	Water vapour permeability	No performance determined



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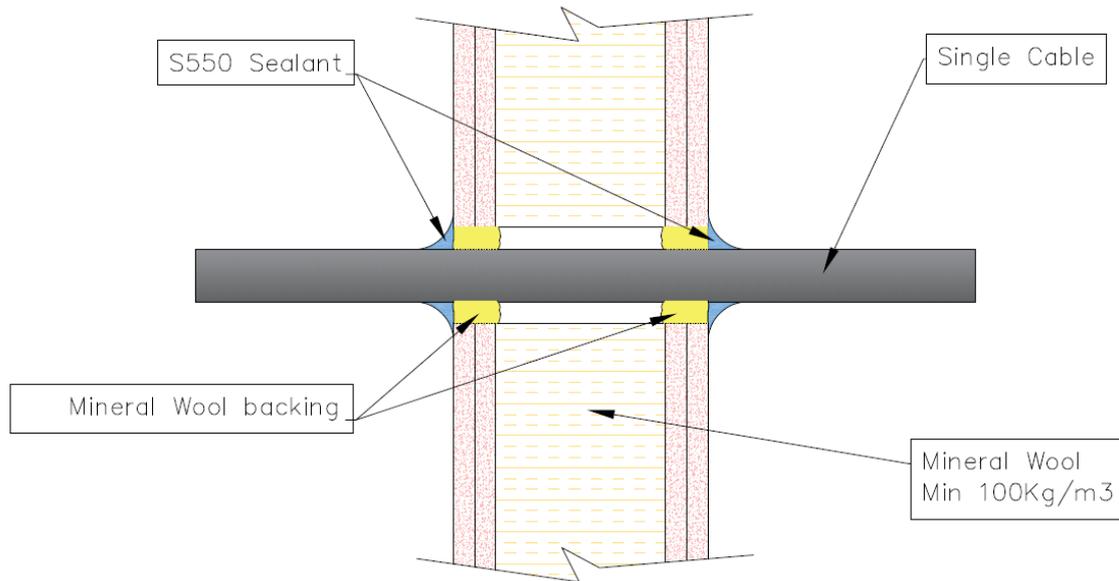
## ANNEX A – Resistance to Fire Classification (Penetration Seal Systems) – HEATSHIELD S550

### A.1 Flexible wall constructions with wall thickness of minimum 100 mm

#### A.1.1 Double sided penetration seal with cables

**Penetration Seal:** Cables centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Annular space	Classification
Single electrical cable of H07RN-F (5x1.5 mm <sup>2</sup> ) with a maximum outer diameter of 14 mm	$\varnothing \leq 25$	Bead of 10 mm x 10 mm	15 mm thick stone wool ( $\rho \geq 50 \text{ kg/m}^3$ ) flush with both surfaces of wall	8 mm	<b>E 60</b> <b>EI 60</b>
Single electrical cable of H07RN-F (4x95 mm <sup>2</sup> ) with a maximum outer diameter of 60 mm	$\varnothing \leq 71$			9 mm	<b>E 120</b> <b>EI 120</b>
Electrical cable(s), single or bundle of up to $\varnothing$ 90 mm, of Cat-5e Network cable with a maximum outer diameter of 6 mm	$\varnothing \leq 100$			5 mm	<b>E 120</b> <b>EI 120</b>

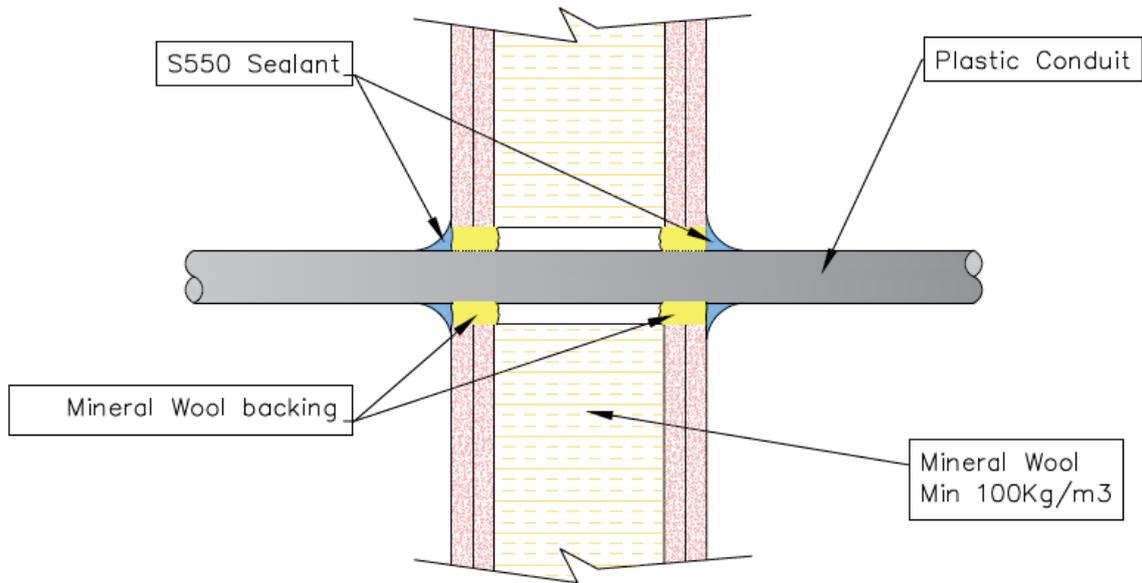


# Appendix UL-EU CERTIFICATE UL-EU-01301-EN

## A.1.2 Double sided penetration seal with plastic conduits

**Penetration Seal:** Combustible conduits (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Annular space	Classification
PVC conduit, Diameter $\leq 20$ mm, wall thickness 1.6 mm	$\varnothing \leq 32$	Bead of 10 mm x 10 mm	15mm thick stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of wall	6 mm	E 60 C/C EI 60 C/C
PVC conduit, Diameter $\leq 32$ mm, wall thickness 2.5 mm	$\varnothing \leq 44$				E 60 C/C EI 60 C/C



**Solutions**

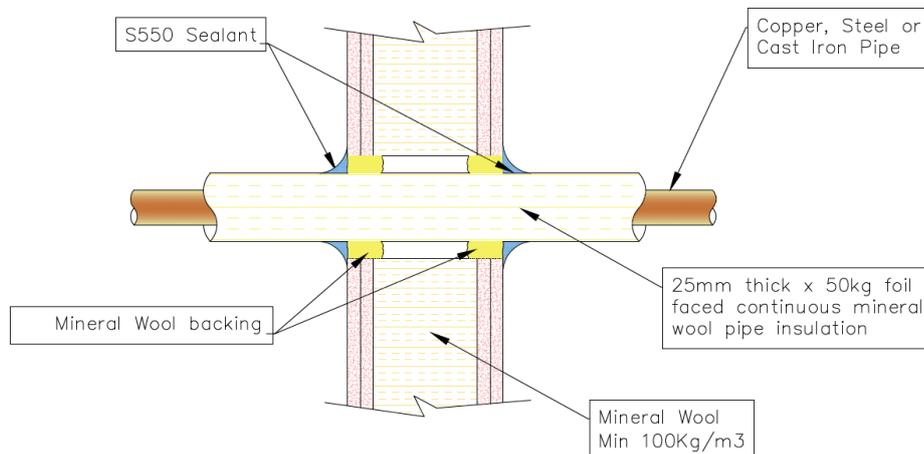
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# Appendix UL-EU CERTIFICATE UL-EU-01301-EN

## A.1.3 Double sided penetration seal with insulated metal pipes

**Penetration Seal:** CS (Continuous Sustained) insulated metallic pipes (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Insulation	Annular space	Classification
Copper, steel or cast iron pipe up to 15 mm diameter and min. wall thickness of 0.7 mm	$\varnothing \leq 71$	Bead of min. 10 mm x 10 mm	10 mm thick stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of wall	Min. 25 mm thick aluminium foil faced stone wool insulation (50 kg/m <sup>3</sup> )	3 mm	E 120 C/C EI 120 C/C
Copper, steel or cast iron pipe up to 67 mm diameter and min. wall thickness of 1.2 mm	$\varnothing \leq 132$		15 mm thick stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of wall		7 mm	E 120 C/C EI 120 C/C
Steel or cast iron pipe up to 22.2 mm diameter and min. wall thickness of 1.2 mm	$\varnothing \leq 82$		3 mm		E 120 C/C EI 120 C/C	
Steel or cast iron pipe up to 76.2 mm diameter and min. wall thickness of 3.25 mm	$\varnothing \leq 132$		3 mm		E 120 C/C EI 120 C/C	
Steel or cast iron pipe up to 152.4 mm diameter and min. wall thickness of 3.25 mm	$\varnothing \leq 220$		9 mm		E 120 C/C EI 90 C/C	

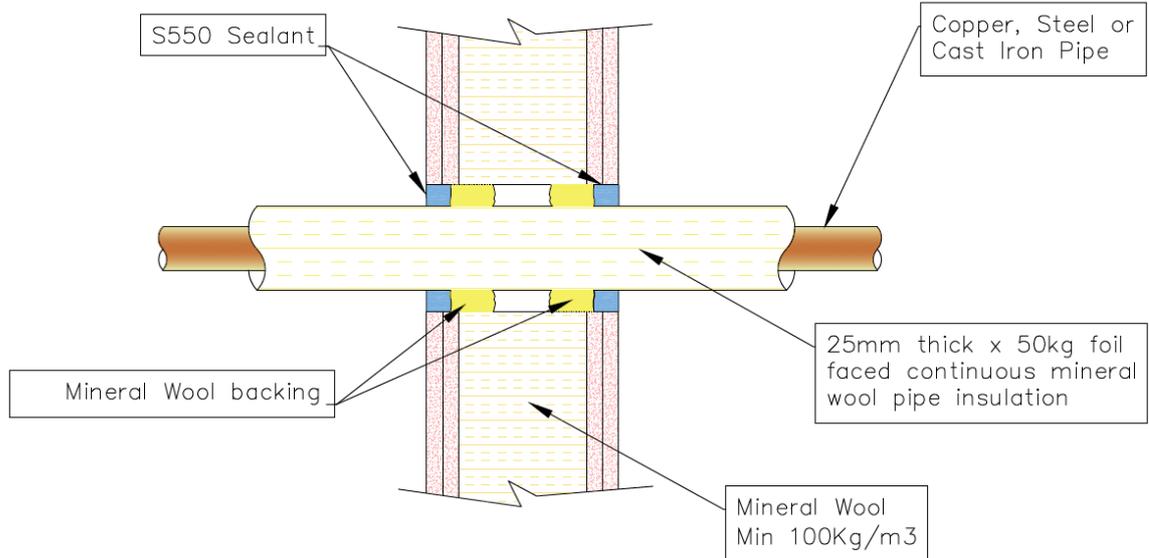


# Appendix UL-EU CERTIFICATE UL-EU-01301-EN

## A.1.4 Double sided penetration seal with insulated metal pipes

**Penetration Seal:** CS (Continuous Sustained) insulated metallic pipes (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Insulation	Annular space	Classification
Copper, steel or cast iron pipe up to 108 mm diameter and min. wall thickness of 1.5 mm	$\text{Ø} \leq 180$	10 mm depth flush with both surfaces of wall	20 mm thick stone wool (50 kg/m <sup>3</sup> ) recessed 10 mm into opening	Min. 25 mm thick aluminium foil faced stone wool insulation (50 kg/m <sup>3</sup> )	11 mm	<b>E 120 C/C</b> <b>EI 90 C/C</b>



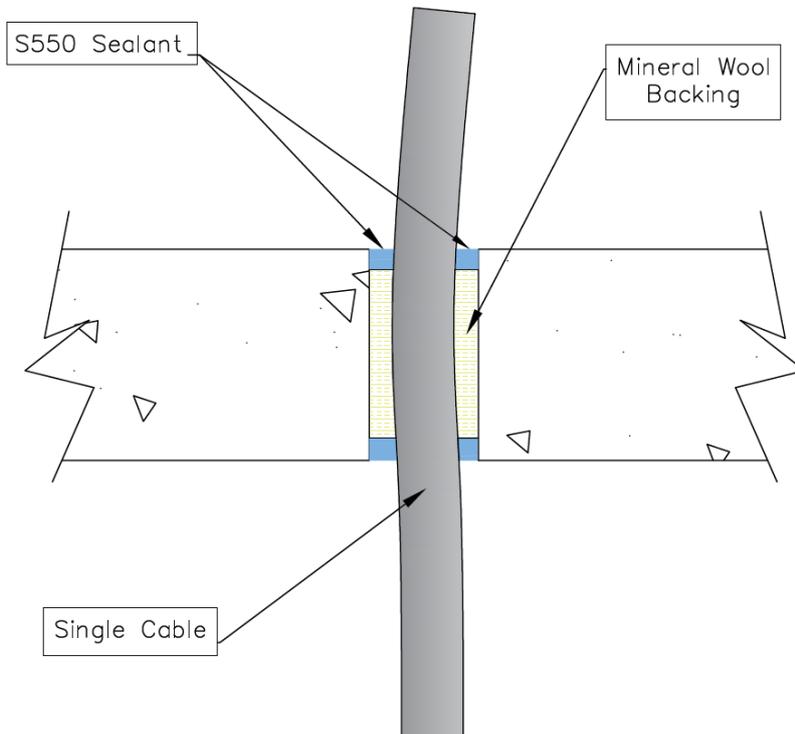
# Appendix UL-EU CERTIFICATE UL-EU-01301-EN

## A.2 Rigid floor constructions with floor thickness of minimum 150 mm

### A.2.1 Double sided penetration seal with cables

**Penetration Seal:** Cables (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Annular space	Classification
Single electrical cable, of NYM-J (5x2.5 mm <sup>2</sup> ) with a maximum outer diameter of 14 mm	Ø ≤ 32	Bead of min. 12 mm x 12 mm	Mineral stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of floor	9 mm	E 120 EI 120
Single electrical cable of N2XH-F (4x95 mm <sup>2</sup> ) with a maximum outer diameter of 45 mm	Ø ≤ 63				E 120 EI 30
Single electrical cable of H07RN-F (4x95 mm <sup>2</sup> ) with a maximum outer diameter of 60 mm	Ø ≤ 71			5-6 mm	E 120 EI 120

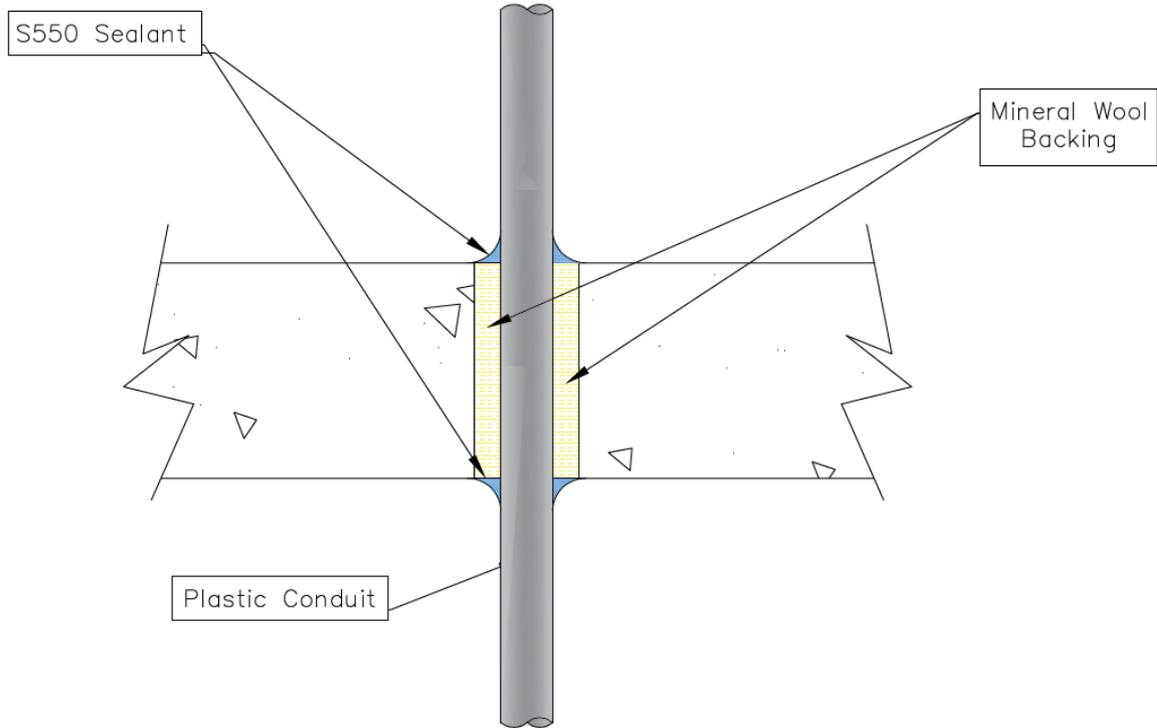


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## A.2.2 Double sided penetration seal with plastic conduits

**Penetration Seal:** Combustible conduits (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Annular space	Classification
PVC conduit, Diameter ≤ 20 mm, wall thickness 1.6 mm	Ø ≤ 32	Bead of 12 mm x 12 mm	Mineral stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of floor	6 mm	E 120 C/C EI 120 C/C
PVC conduit, Diameter ≤ 32 mm, wall thickness 2.5 mm	Ø ≤ 44				E 120 C/C EI 120 C/C

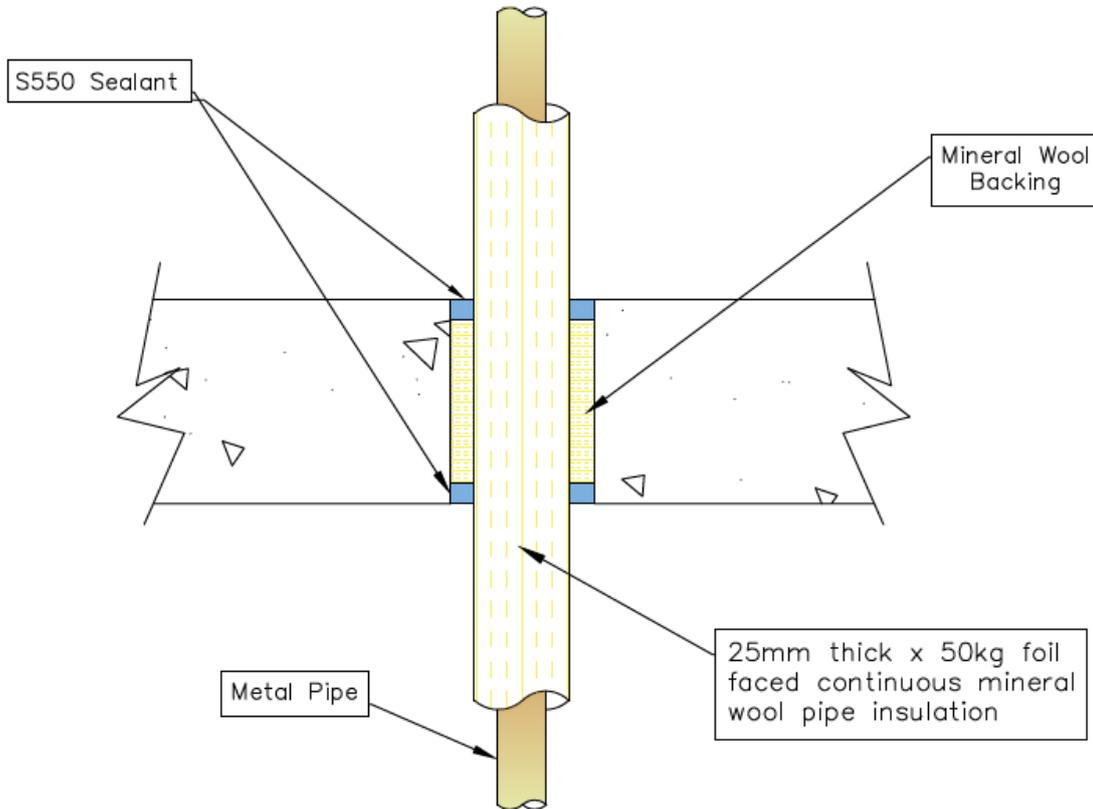


# Appendix UL-EU CERTIFICATE UL-EU-01301-EN

## A.2.3 Double sided penetration seal with insulated metal pipes

**Penetration Seal:** CS (Continuous Sustained) insulated metallic pipes (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Insulation	Annular space	Classification
Steel or cast iron pipe up to 22.2 mm diameter and min. wall thickness of 1.2 mm	$\text{Ø} \leq 102$	12 mm depth	Mineral stone wool (50 kg/m <sup>3</sup> ) recessed 12 mm from both surfaces of floor	Min. 25 mm thick aluminium foil faced stone wool insulation (50 kg/m <sup>3</sup> )	15 mm	<b>E 120 C/C</b> <b>EI 120 C/C</b>
Steel or cast iron pipe up to 76.2 mm diameter and min. wall thickness of 3.25 mm	$\text{Ø} \leq 150$				12 mm	<b>E 120 C/C</b> <b>EI 120 C/C</b>
Steel or cast iron pipe up to 152.4 mm diameter and min. wall thickness of 3.25 mm	$\text{Ø} \leq 244$				21 mm	<b>E 120 C/C</b> <b>EI 90 C/C</b>

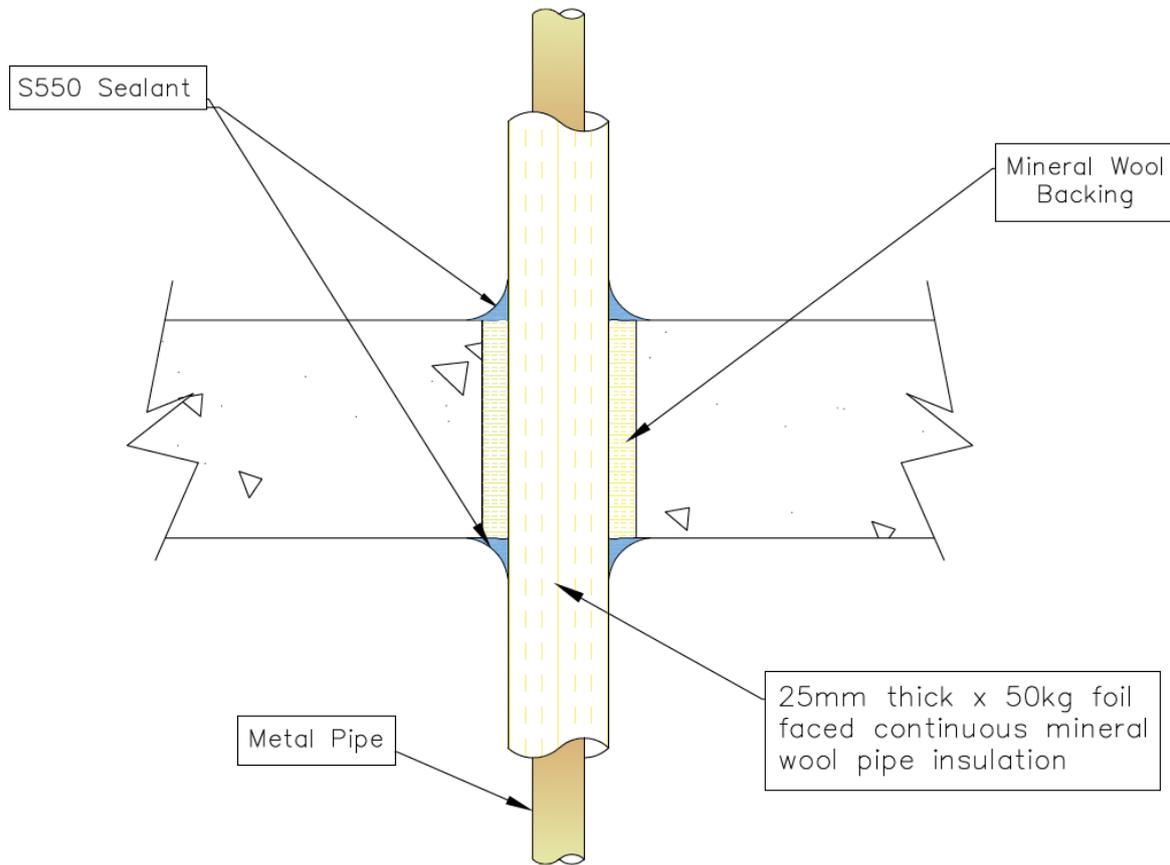


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## A.2.4 Double sided penetration seal with insulated metal pipes (S550 bead application)

**Penetration Seal:** CS (Continuous Sustained) insulated metallic pipes (single) centered within the aperture and sealed with HEATSHIELD S550. Minimum separation between penetration seals of 100 mm.

Construction details:



Services	Opening size [mm]	S550 sealant details	Backing material	Inuslation	Annular space	Classification
Copper, steel or cast iron pipe up to 67 mm diameter and min. wall thickness of 1.2 mm	$\text{Ø} \leq 132$	Bead of min. 12 mm x 12 mm	Mineral stone wool (50 kg/m <sup>3</sup> ) flush with both surfaces of floor	Min. 25 mm thick aluminium foil faced stone wool insulation (50 kg/m <sup>3</sup> )	6-7 mm	<b>E 120 C/C</b> <b>EI 120 C/C</b>
Copper, steel or cast iron pipe up to 108 mm diameter and min. wall thickness of 1.5 mm	$\text{Ø} \leq 180$				11 mm	<b>E 120 C/C</b> <b>EI 120 C/C</b>



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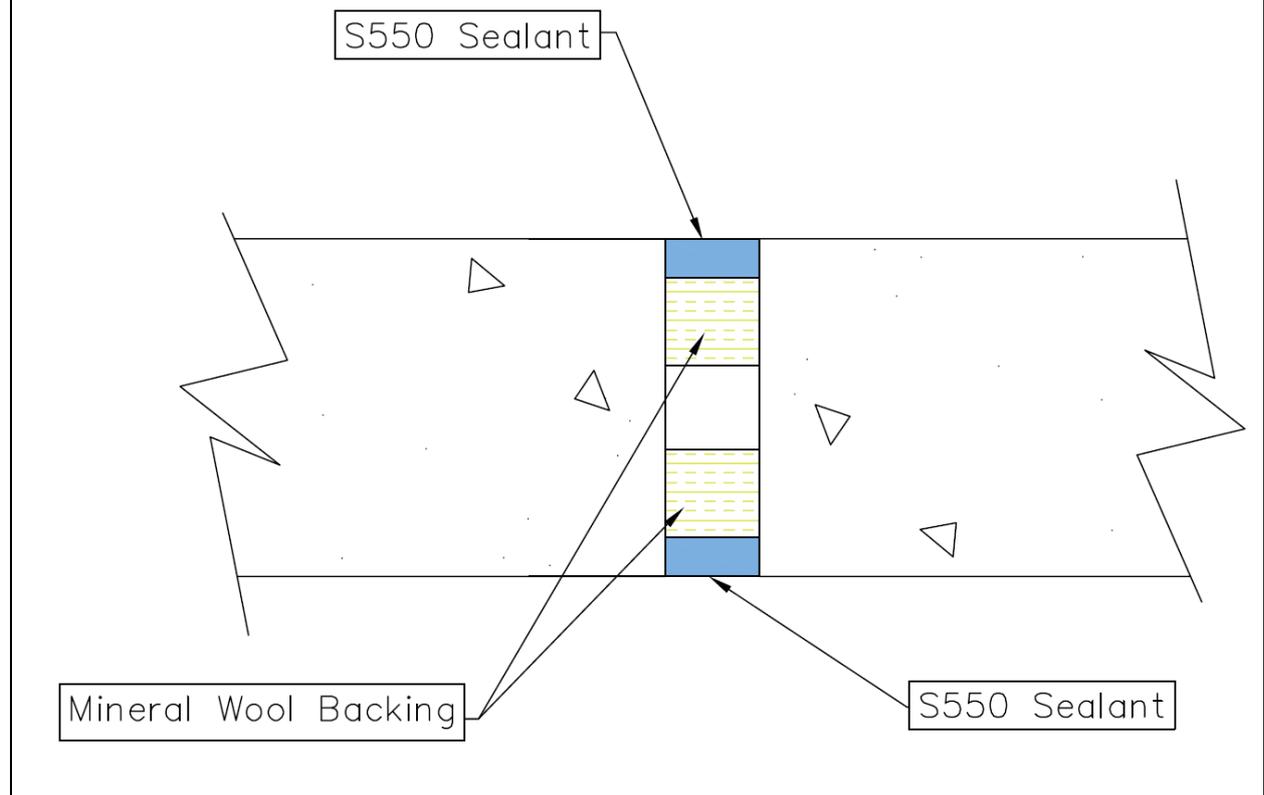
## Resistance to Fire Classification (Linear Joint Seals) – HEATSHIELD S550

### A.3 Rigid wall constructions with wall thickness of minimum 120 mm

#### A.3.1 Linear joint seals between walls (vertical)

**Joint Seal:** HEATSHIELD S550 to both sides of the wall backed with mineral stone wool (50kg/m<sup>3</sup>) with a min. compression of 50% across the joint width. Backing material to be recessed from surface of wall to accommodate required sealant thickness.

Construction details:



Substrate	Sealant depth [mm]	Maximum joint width [mm]	Backing (minimum)	Classification
Concrete	10	20	50 mm depth	EI 240-V-X-B-W10 to W20
	20	40	40 mm depth	EI 240-V-X-B-W10 to W40



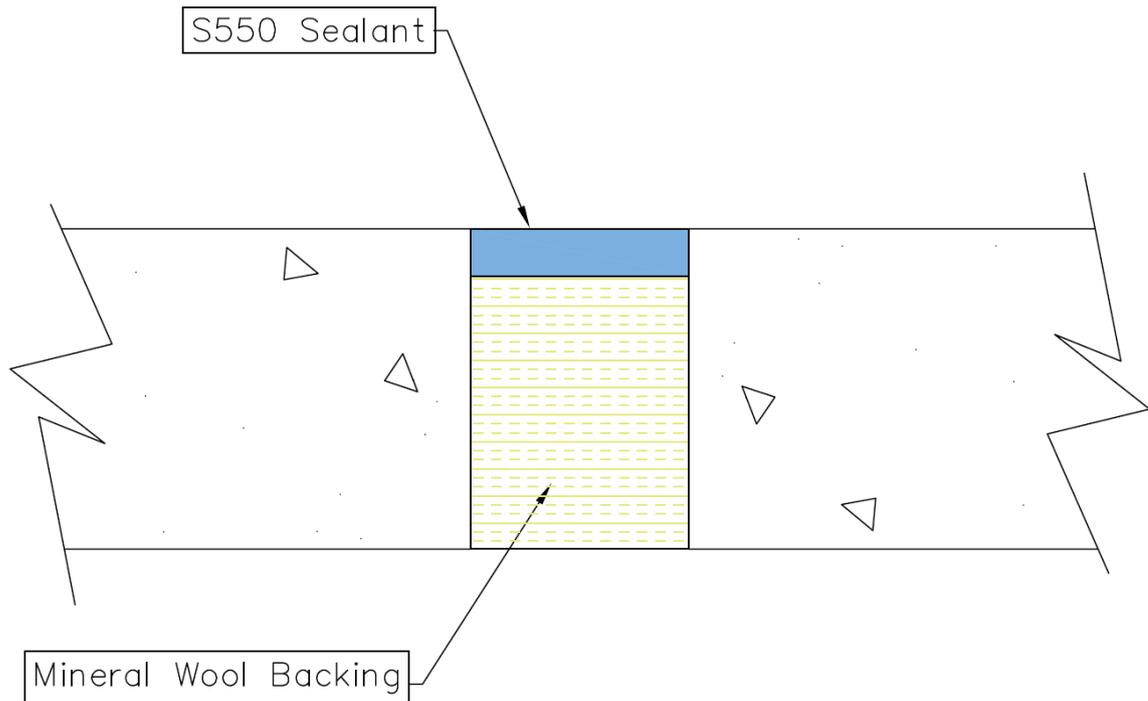
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## A.4 Rigid floor constructions with floor thickness of minimum 150 mm

### A.4.1 Linear joint or gap seal between floor slabs

**Joint Seal:** HEATSHIELD S550 applied flush to top side of floor backed with mineral stone wool (50kg/m<sup>3</sup>) with a min. compression of 50% across the joint width. Backing material to be recessed from top surface of floor to accommodate required sealant thickness.

Construction details:



Substrate	Sealant depth [mm]	Maximum joint width [mm]	Backing (minimum)	Classification
Concrete	12	12	138 mm depth	EI 120-H-X-B-W 00 to W 12
	12	30	138 mm depth	EI 120-H-X-B-W 00 to W 30



## Appendix UL-EU CERTIFICATE UL-EU-01301-EN

The UL-EU Marks, displayed below represent the enhanced and alternate version of the product marking. Either Mark can be used. These Marks shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



\*Note: E12345 is an example of the UL file number.

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 and UL File 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

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