

UL-EU CERTIFICATE

Certificate No.
UL-EU-00704-EN

Issue date
2015-02-10

Issue No.
5

Re-Issue date
2025-09-29

Expiry date
2035-09-28



4705

This is to acknowledge that:
Neutron Fire Technologies Limited

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

Has had the product:
Firebreak 66

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

EAD 350454-00-1104, September 2017

Places of production:
A/001

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shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



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This certificate relates to the use of Firebreak 66 sealant for fire stopping where there are service penetrations through floors and walls. The detailed scope is given in pages 3 to 13 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-240007
- ii) UK – CERTIFICATE OF CONSTANCY OF PERFORMANCE 0843 – CPR – 1357
- 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 Serviceability as defined in EAD 350141-00-1106, September 2017

* Firebreak 66 sealant has demonstrated its suitability for use in internal conditions, including temperatures below 0°C, without exposure to rain or UV and in the temperature range -5°C to 70°C. These conditions are designated Y₂ (-5°/70°C), Z₁ & Z₂ in EAD 350454-00-1104, September 2017.



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Product-type: Sealant		Intended use: Penetration Seal
Assessment method	Essential characteristic	Product Performance
BWR 2 Safety in case of fire		
EN 13501-1	Reaction to fire	Class E
EN 13501-2	Resistance to fire	See pages 4 to 10
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 (-5°/70°C)
BWR 5 Protection against noise		
EN 10140-1,2,4,5/ EN ISO 717-1	Airborne sound insulation	See pages 11 to 13
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



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FIREBREAK 66: Service Penetration Seals in Walls – Plastic Pipes									
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Fire Resistance (mins.)	
								E	EI
Masonry/ Concrete	150	7.5	Up to 20mm Ø PVC-U Pipe, 1.2 mm wall thickness~	Both Sides	40	Stone Mineral Wool*	70	120	120
		20	Up to 40mm Ø PVC-U Pipe, 3.0 mm wall thickness					240	240
		25	Up to 55mm Ø PVC-U Pipe, 2.2 mm wall thickness					180	180
		25	Up to 82mm Ø PVC-U Pipe, 2.5 mm wall thickness					30	15
		7.5	Up to 20mm Ø HDPE Pipe, 2.0 mm wall thickness~					120	120
		20	Up to 40mm Ø HDPE Pipe, 3.0 mm wall thickness					240	240
		25	Up to 55mm Ø HDPE Pipe, 3.2 mm wall thickness					120	120
		10	Up to 16mm Ø MLCP** Pipe, 2.4 mm wall thickness					180	180
		7.5	Up to 20mm Ø MLCP** Pipe, 2.5 mm wall thickness~					120	120
		15	Up to 20mm Ø MLCP** Pipe, 3.0 mm wall thickness					180	180
		15	Up to 25mm Ø MLCP** Pipe, 3.0 mm wall thickness					180	90
		20	Up to 40mm Ø MLCP** Pipe, 4.0 mm wall thickness					180	15
		20	Up to 50mm Ø MLCP** Pipe, 4.5 mm wall thickness					60	15
		25	Up to 63mm Ø MLCP** Pipe, 6.0 mm wall thickness					60	60
		30	Up to 90mm Ø MLCP** Pipe, 9.0 mm wall thickness					45	30
	100	15	Up to 55mm Ø PVC-U Pipe, 3.2 mm wall thickness	Full depth of wall	100	None	None	90	90
		20	Up to 160 mm Ø PVC-U Pipe, 4 mm wall thickness					90	60

* 90 kg/m³, ** # Multilayer composite pipe – PE-RT/Al/PE-RT

All pipe classifications are pipe end configurations C/U, U/C and C/C, with the exception of those marked '~' which are U/U, C/U, U/C (U=Uncapped, C=Capped).



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FIREBREAK 66: Service Penetration Seals in Walls – Metal Pipes										
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Insulation	Fire Resistance (mins.)	
									E	EI
Masonry/Concrete	150	25	Up to 89mm Ø Steel Pipe, 4.0-14.2 mm wall thickness	Both Sides	40	Stone Mineral Wool*	70	25 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	60
		20	Up to 40mm Ø Steel Pipe, 3.2-14.2 mm wall thickness	Both Sides	10	Stone Mineral Wool*	130	None	180	20
		22.5	Up to 35mm Ø Copper or Steel Pipe, 1.5-14.2 mm wall thickness						240	30
		20	Up to 40mm Ø Steel Pipe, 3.2-14.2 mm wall thickness					25 mm Armaflex Class O or K-Flex ST interrupted at the seal and continuous over pipe length	240	180
		22.5	Up to 35mm Ø Copper or Steel Pipe, 1.5-14.2 mm wall thickness					25 mm Armaflex Class O or K-Flex ST interrupted at the seal and min. 500 mm long		
								25 mm Armaflex Class O or K-Flex ST interrupted at the seal and continuous over pipe length	240	180

* 90 kg/m³

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



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FIREBREAK 66: Service Penetration Seals in Flexible or Rigid Walls – Plastic Pipes									
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Fire Resistance (mins.)	
								E	EI
Drywall/ Masonry/ Concrete	100	6	Up to 20mm Ø PVC-U Pipe, 1.0 mm wall thickness	Both Sides	30	Stone Mineral Wool*	40	120	120
		10	Up to 40mm Ø PVC-U Pipe, 1.9-3.0 mm wall thickness					120	120
		20	Up to 110mm Ø PVC-U Pipe, 1.8 mm wall thickness					120	90
		10	Up to 32mm Ø HDPE Pipe, 2.0 mm wall thickness					120	120
		10	Up to 40mm Ø HDPE Pipe, 2.4-3.7 mm wall thickness					120	120
		15	Up to 75mm Ø HDPE Pipe, 4.5 mm wall thickness					120	120
		15	Up to 75mm Ø HDPE Pipe, 4.5-6.8 mm wall thickness					60	60
		15	Up to 50mm Ø PP Pipe, 4.6 mm wall thickness					120	120
		25	Up to 110mm Ø HDPE Pipe, 6.8-8.2 mm wall thickness~	Full depth of wall	100	None	None	90	90
		25	Up to 160mm Ø HDPE Pipe, 10.2 mm wall thickness~					90	90
		15	Up to 55mm Ø PVC-U Pipe, 3.2 mm wall thickness~	Full depth of wall	100	None	None	90	90
		20	Up to 160mm Ø PVC-U Pipe, 4.0 mm wall thickness~					90	60

* 33 kg/m³

All pipe classifications are pipe end configurations U/U, C/U, U/C and C/C, with the exception of those marked '~' which are U/C and C/C (U=Uncapped, C=Capped).



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FIREBREAK 66: Service Penetration Seals in Flexible or Rigid Walls – Metal Pipes										
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Insulation	Fire Resistance (mins.)	
									E	EI
Drywall/ Masonry/ Concrete	100	10	Up to 89mm Ø Steel pipe, 1.5-14.2 mm wall thickness	Both Sides	30	Stone Mineral Wool*	40	13 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	90
		10-15	Up to 89mm Ø Steel pipe, 1.5-14.2 mm wall thickness					13-25 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	90
		10-15	Up to 89mm Ø Steel pipe, 2.0-14.2 mm wall thickness					19-25 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	90
		10	Up to 115mm Ø Steel pipe, 1.5-14.2 mm wall thickness					19 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	90
		10-15	Up to 115mm Ø Steel pipe, 1.5-14.2 mm wall thickness					19-32 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	90
	130	20	Up to 219mm Ø Steel pipe, 7.0-14.2 mm wall thickness				70	40 mm Armaflex Class O or K-Flex ST continuous though the seal and over pipe length	120	120

* 33 kg/m³

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FIREBREAK 66: Service Penetration Seals in Floors – Plastic Pipes									
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Fire Resistance (mins.)	
								E	EI
Concrete	150	7.5	Up to 20mm Ø PVC-U Pipe, 1.5 mm wall thickness~	Both Sides	40	Stone Mineral Wool*	70	120	120
		25	Up to 82mm Ø PVC-U Pipe, 2.0 mm wall thickness					20	20
		25	Up to 75mm Ø HDPE Pipe, 3.0 mm wall thickness					60	45
		10	Up to 16mm Ø MLCP** Pipe, 2.4 mm wall thickness					240	90
		7.5	Up to 20mm Ø MLCP** Pipe, 1.5 mm wall thickness					120	120
		7.5	Up to 20mm Ø MLCP** Pipe, 2.5 mm wall thickness					120	15
		15	Up to 20mm Ø MLCP** Pipe, 3.0 mm wall thickness					240	240
		15	Up to 25mm Ø MLCP** Pipe, 2.5 mm wall thickness					240	15
		20	Up to 40mm Ø MLCP** Pipe, 4.0 mm wall thickness					90	90
		20	Up to 50mm Ø MLCP** Pipe, 4.5 mm wall thickness					20	15
		25	Up to 63mm Ø MLCP** Pipe, 6.0 mm wall thickness					30	20
		30	Up to 90mm Ø MLCP** Pipe, 9.0 mm wall thickness					20	15
		6	Up to 20mm Ø PVC-U Pipe, 1.5 mm wall thickness~		20		110	240	240
		10	Up to 40mm Ø PVC-U Pipe, 1.9 mm wall thickness~		30		90	240	240
		15	Up to 50mm Ø PVC-U Pipe, 2.4 mm wall thickness~					60	60
		20	Up to 110mm Ø PVC-U Pipe, 1.8 mm wall thickness~					70	90
		6	Up to 20mm Ø HDPE Pipe, 1.0 mm wall thickness~		20		20	240	240
		10	Up to 40mm Ø HDPE Pipe, 2.4 mm wall thickness~		30		90	60	60
		12.5	Up to 75mm Ø HDPE Pipe, 3.0 mm wall thickness~					180	180
		25	Up to 160mm Ø HDPE Pipe, 9.5 mm wall thickness^					70	120

* 90 kg/m³, ** # Multilayer composite pipe – PE-RT/Al/PE-RT

All pipe classifications are pipe end configurations C/U, U/C and C/C, with the exception of those marked '~' which are U/U, C/U, U/C and C/C, and those marked '^' which are U/C and C/C (U=Uncapped, C=Capped).



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FIREBREAK 66: Service Penetration Seals in Floors – Metal Pipes										
Substrate	Minimum Substrate Thickness (mm)	Required Seal size (annular space) (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Insulation	Fire Resistance (mins.)	
									E	EI
Concrete	150	36	Up to 40mm Ø Steel Pipe, 2-14.2 mm wall thickness	Both Sides	10	Stone Mineral Wool**	130	None	240	60
		6	Up to 40mm Ø Steel Pipe, 2-14.2 mm wall thickness					30 mm Armaflex Class O or K-Flex ST interrupted at the seal and min. 450 mm long to both sides of the floor	240	240
		6	Up to 40mm Ø Steel Pipe, 2-14.2 mm wall thickness					30 mm Armaflex Class O or K-Flex ST interrupted at the seal and min. 500 mm long above the floor	240	240
		10	Up to 89 mm Ø Steel Pipe, 1.5-14.2 mm wall thickness		20/40		90	13 mm Armaflex Class O or K-Flex ST continuous through the seal and continuous over pipe length	120	120
		20	Up to 219 mm Ø Steel Pipe, 7.0-14.2 mm wall thickness				20	40 mm Armaflex Class O or K-Flex ST continuous through the seal, extending min. 100 mm over the pipe above the floor and continuous over pipe length below the floor	120	90

* 90 kg/m³, ** 33 kg/m³

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



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FIREBREAK 66: Service Penetration Seals in Floors – Electrical cables										
Substrate	Minimum Substrate Thickness (mm)	Maximum seal diameter (mm)	Penetrating Services	Seal Position	Minimum Seal Depth (mm)	Backing Material	Minimum Backing Depth (mm)	Insulation	Fire Resistance (mins.)	
									E	EI
Concrete	150	102	5 x 1.5 mm ² core HD604.5 electrical cable, 15 mm diameter	Both Sides	10	Stone Mineral Wool*	130	None	240	90
			4 x 95 mm ² core HD604.5 electrical cable, 42 mm diameter						240	90
		102	1 x 185 mm ² core HD603.3 electrical cable 23-27 mm diameter						240	240

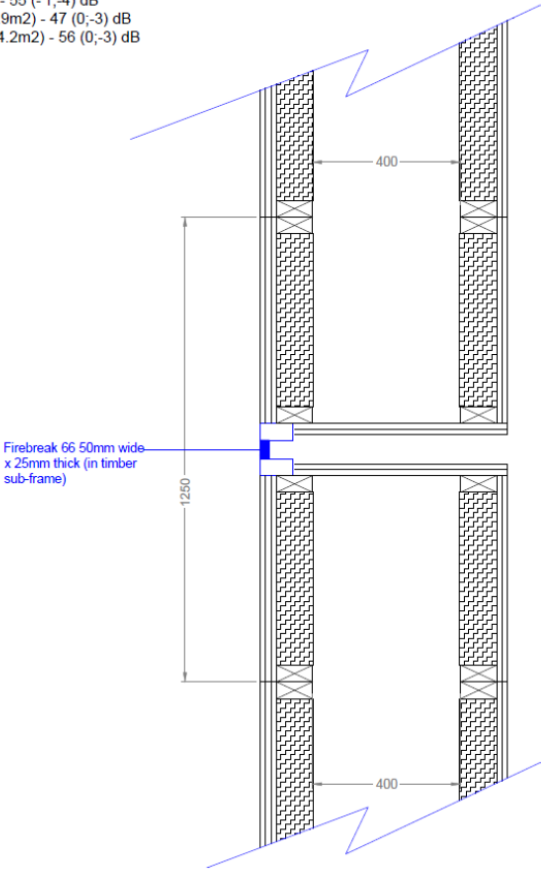
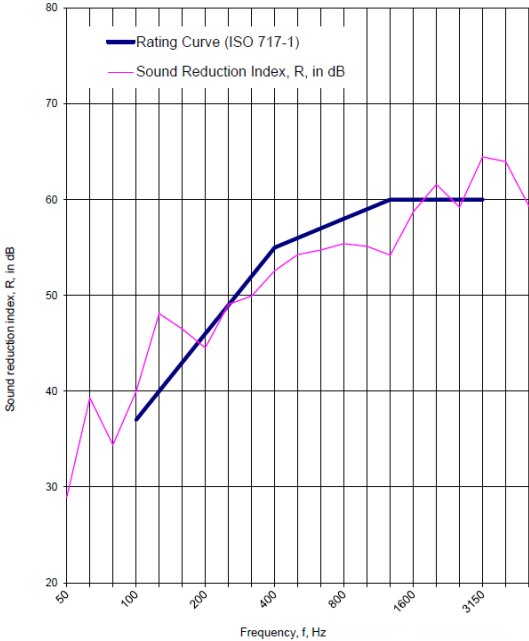
* 90 kg/m³, ** 33 kg/m³



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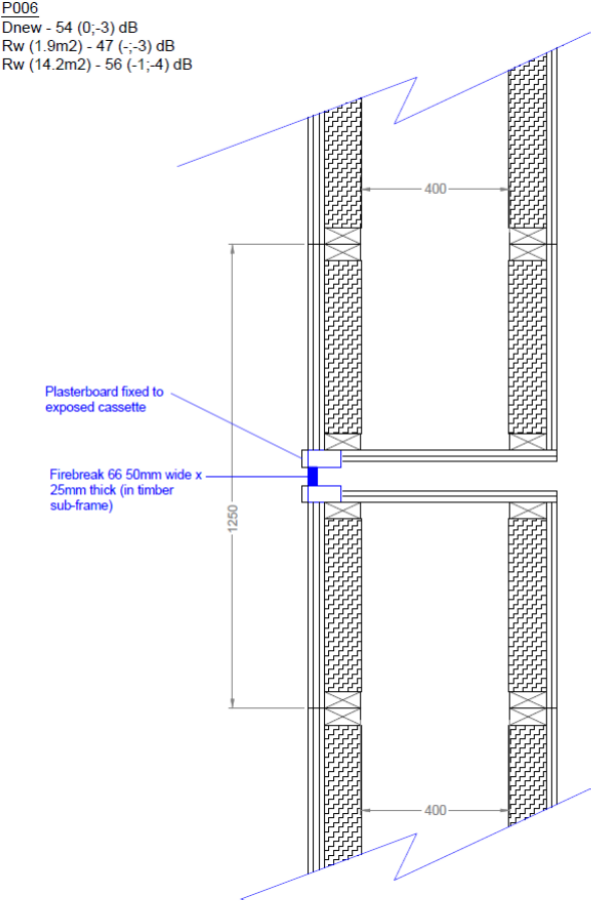
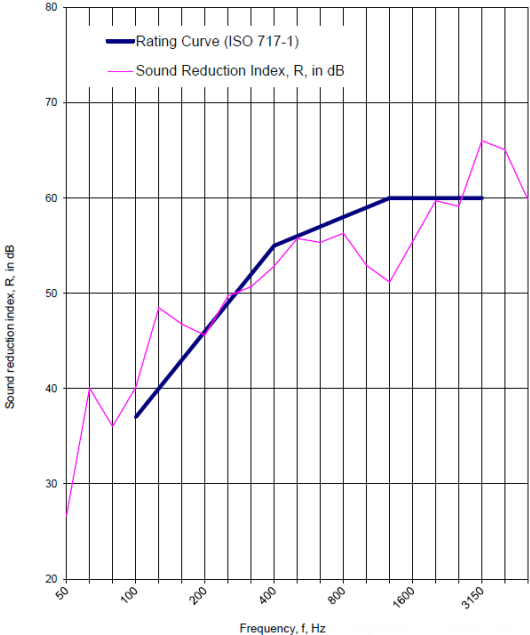
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Acoustic Performance According to BS EN ISO 10140-2:2010	
Firebreak 66, 50mm wide x 25mm thick (no backing material), in the following configuration:	
Configuration	$R_w(C; C_{tr})$
<div><p>P005 Dnew - 55 (-1;-4) dB Rw (1.9m2) - 47 (0;-3) dB Rw (14.2m2) - 56 (0;-3) dB</p></div>	<div><p>56 (0;-3) dB</p></div>

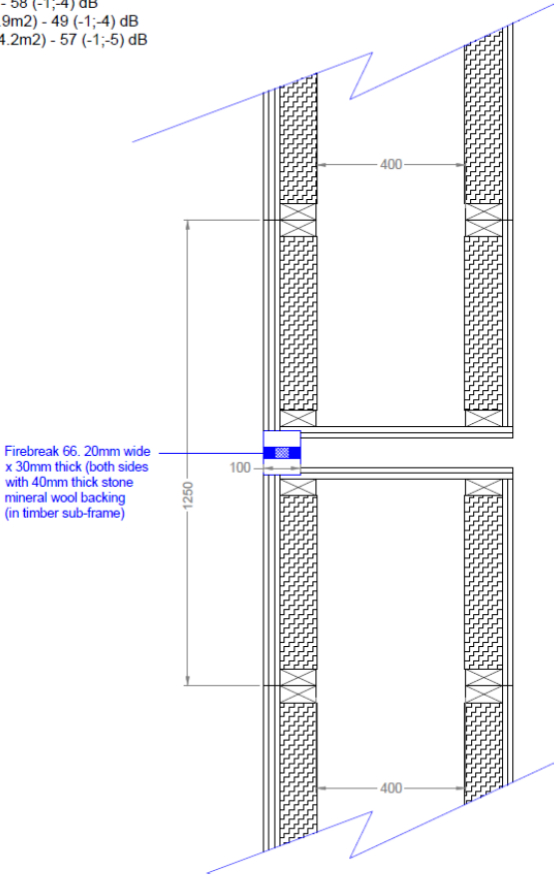
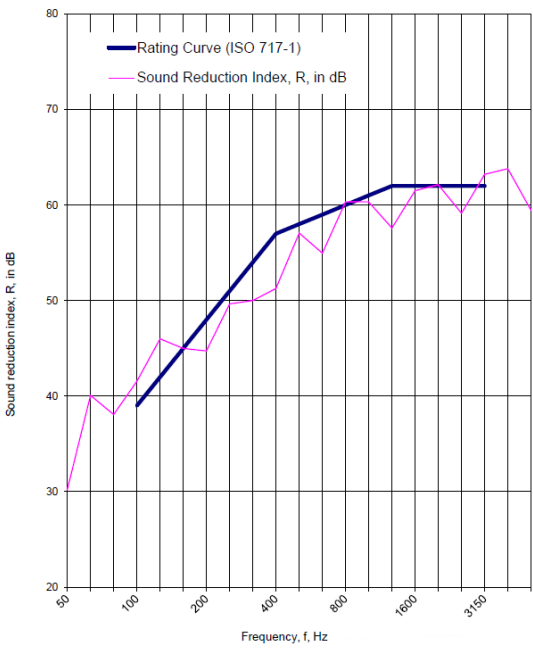


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Acoustic Performance According to BS EN ISO 10140-2:2010 Firebreak 66, 50mm wide x 25mm thick (no backing material). Plaster board fixed to exposed cassette, in the following configuration:	
Configuration	$R_w(C; C_{tr})$
<div><p>P006 Dnew - 54 (0;-3) dB Rw (1.9m2) - 47 (-;-3) dB Rw (14.2m2) - 56 (-1;-4) dB</p></div>	<div><p>56 (-1;-4) dB</p></div>



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Acoustic Performance According to BS EN ISO 10140-2:2010	
Firebreak 66, 20mm wide x 30mm thick sealant (both sides) with 40mm stone mineral wool backing, in the following configuration:	
Configuration	$R_w(C; C_{tr})$
<div><p>P013 Dnew - 58 (-1;-4) dB Rw (1.9m2) - 49 (-1;-4) dB Rw (14.2m2) - 57 (-1;-5) dB</p></div>	<div><p>57 (-1;-5) dB</p></div>



Appendix UL-EU CERTIFICATE UL-EU-00704-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

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.



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