EN

DECLARATION OF PERFORMANCE

according to Annex III of the Regulation (EU) Nr. 305/2011 (Construction Products Regulation)

Hilti Firestop Silicone Sealant CFS-S SIL

No. Hilti CFS-S SIL

1. Unique identification code of the product-type:
Hilti Firestop Silicone Sealant CFS-S SIL

2. Intended use:
Fire Stopping and Sealing Product for Linear Joint and Gap Seals, see ETA-10/0291 (28.06.2018)

Linear Joints and Gap Seal	Fire Stopping and Fire Sealing Products: Linear Joint and Gap Seals

3. Manufacturer:
HILTI Corporation, Feldkircherstrasse 100, 9494 Schaan, Principality of Liechtenstein

4. System of AVCP:
System 1

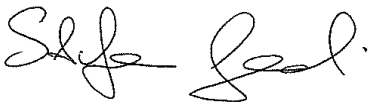
5. European Assessment Document:
EAD 350454-00-1104 “Fire stopping and fire sealing products – Penetration seals”
European Technical Assessment:
ETA-10/0291 (28.06.2018)
Technical Assessment Body:
OIB Austrian Institute of Construction Engineering
Notified body/s:
MPA Braunschweig, No. 0761

6. Declared performance:

Essential characteristic	Declared performance / Harmonised technical specification
Reaction to fire	Class B-s2, d1 according to EN 13501-1
Resistance to fire	Resistance to fire performance and field of application in accordance with EN 13501-2. See Annex
Air permeability	Tested according to EN 1026. See Annex
Protection against noise	Tested according to EN ISO 10140-1:2016, EN ISO 10140-2:2010 and EN ISO 717-1:2013. See Annex
Durability and serviceability	X according to EAD 350454-00-1104

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:



Stefan Juli
Product Manager
Business Fire Protection
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Schaan, 2018-06-28

Intended use

"Hilti Firestop Silicone Sealant CFS-S SIL" is intended to reinstate the fire resistance performance of rigid wall or floor constructions at linear gaps/joints within those constructions or where they are abutting another wall or floor/ceiling/roof construction.

In wall constructions the sealant is used on both sides, in floor constructions on the top side. The joint edges are treated with "Hilti Primer CSP 264" / "Hilti Firestop Primer CFS-PRIM" to achieve the necessary adhesion.

The joint edges can be formed by rigid constructions or by steel/metal components/ attachments, see Annex B.1 and B.2 of the ETA.

The maximum gap/joint width of the linear joint and gap seal has to comply with the dimensions as specified in the following table.

Construction-element	Construction
Rigid walls	> Concrete, hollow blocks, masonry > Minimum density 2400 kg/m³ > Minimum thickness 150 mm > The rigid wall shall be classified in accordance with EN 13501-2 for the required fire resistance period > Maximum joint width 100 mm
Rigid floors	> Concrete > Minimum density 2400 kg/m³ > Minimum thickness 150 mm > The rigid floor shall be classified in accordance with EN 13501-2 for the required fire resistance period > Maximum joint width 100 mm

Resistance to fire

"Hilti Firestop Silicone Sealant CFS-S SIL" was tested according to EAD 350141-00-1106 clause 2.2.2, EN 1366-4:2006-08 in conjunction with EN 1363-1:1999-10, installed within linear joints in rigid walls and rigid floors.

Based upon the gained test results and the field of application specified within EN 1366-4:2006-08 in conjunction with EN 1363-1:1999-10 "Hilti Firestop Silicone Sealant CFS-S SIL" has been classified according to EN 13501-2:2007+A1:2009. The individual fire resistance classes are listed in Annex B.1 to B.2 of the ETA.

Air permeability

The air permeability of "Hilti Firestop Silicone Sealant CFS-S SIL" with a thickness of 50 mm was tested according to the principles of EN 1026:2000.

Pressure [Pa]	50	250
q/A air [$m^3/(h \cdot m^2)$]	impermeable	impermeable

Airborne sound insulation

The airborne sound insulation of “Hilti Firestop Silicone Sealant CFS-S SIL” was tested according to EN ISO 10140-1:2016 and EN ISO 10140-2:2010 in a mobile joint measuring apparatus, consisting of a high-performance sound insulating element made of metal profiles and Bondal sheet with slide-in cassettes. The rating of the sound insulation properties has been calculated according to EN ISO 717-1:2013.

Abbreviations used in drawings

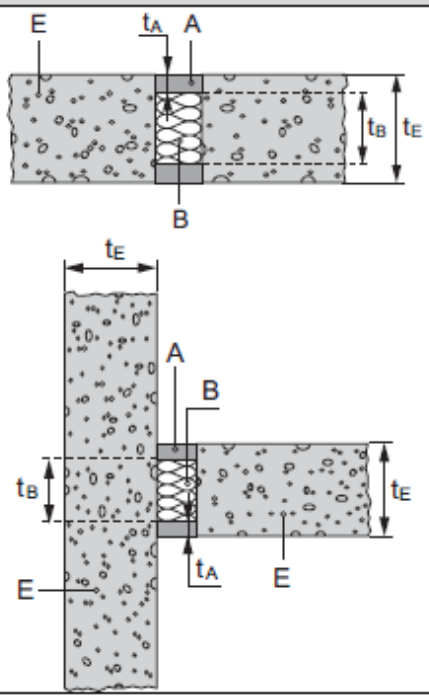
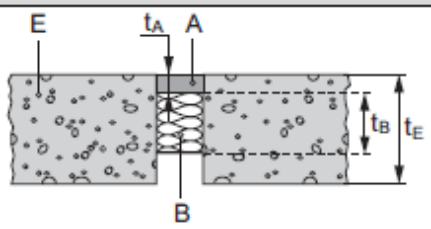
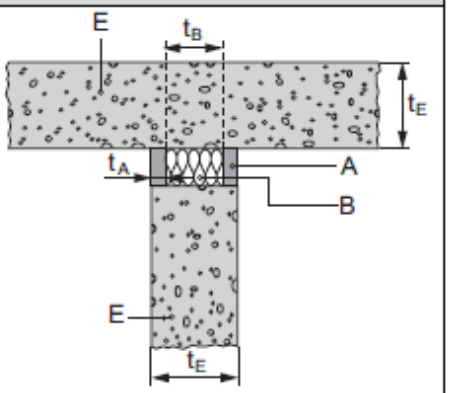
Abbreviation	Description
A, A_1	Hilti Firestop Silicone Sealant CFS-S SIL
A_2	Hilti Firestop Round Cord CFS-CO
B	Termarock 40 fire protection panel
E, E_1	Building element (wall, floor)
t_A	Thickness of Hilti Firestop Silicone Sealant CFS-S SIL
t_B	Thickness of backfilling material
t_E	Thickness of the building element

RESISTANCE TO FIRE CLASSIFICATION OF LINEAR JOINT AND GAP SEALS MADE FROM HILTI FIRESTOP SILICONE SEALANT CFS-S SIL

"Hilti Firestop Silicone Sealant CFS-S SIL" (A) together with "Termarock 40" (B) as specified in Annex B.1.3 of the ETA as backfilling material:

- Vertical joints in / between rigid wall constructions: tB ≥ 150 mm / gap filled completely
- Joints in rigid floor constructions: tB ≥ 100 mm
- Horizontal joints in a rigid wall abutting a rigid floor, ceiling or roof: tB ≥ 100 mm / gap filled completely

Within or between rigid constructions (E) according to Clause 2.1 of the ETA of tE ≥ 150 mm in linear joints with maximum ± 25 % movement, splice distance minimum 1250 mm:

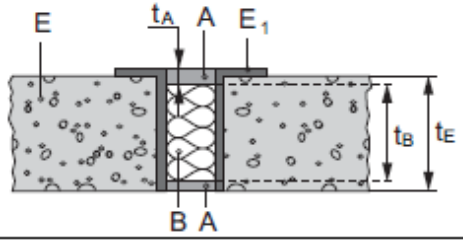
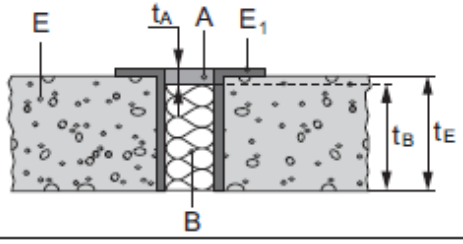
A	B	C
Vertical joints in / between wall constructions	Joints in floor constructions	Horizontal joints in a wall abutting a floor, ceiling or roof
		

Orientation	Joint width (mm)	Classification
Vertical joints in / between wall constructions (A)	6 to 20 [a]	EI 180-V-M 25-F-W 6 to 20 E 240-V-M 25-F-W 6 to 20
Joints in floor constructions (B) and Horizontal joints in a wall abutting a floor, ceiling or roof (C)		EI 180-H-M 25-F-W 6 to 20 E 240-H-M 25-F-W 6 to 20
Vertical joints in / between wall constructions (A)	20 to 100 [b]	EI 180-V-M 25-F-W 20 to 100 E 240-V-M 25-F-W 20 to 100
Joints in floor constructions (B) and Horizontal joints in a wall abutting a floor, ceiling or roof (C)		EI 120-H-M 25-F-W 20 to 100

[a] t_A = 6 mm, compression of mineral wool minimum 60%

[b] t_A = 10 mm, compression of mineral wool minimum 50%

Between steel construction elements or in rigid constructions with steel elements as joint faces in linear joints with maximum ± 7,5% movement (non-movement joints), splice distance minimum 1250 mm, $t_E \geq 150$ mm, $t_B \geq 150$ mm / gap filled completely:

A	B
Vertical joints in / between wall constructions	Joints in floor constructions
	

Orientation	Joint width (mm)	Classification
Vertical joints in / between wall constructions (A)	6 to 30 [a]	EI 60-V-X-F-W 6 to 30 E 240-V-X-F-W 6 to 30
Joints in floor constructions (B) and Horizontal joints in a wall abutting a floor, ceiling or roof		EI 60-H-X-F-W 6 to 30 E 240-H-X-F-W 6 to 30

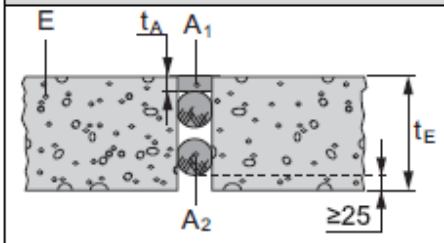
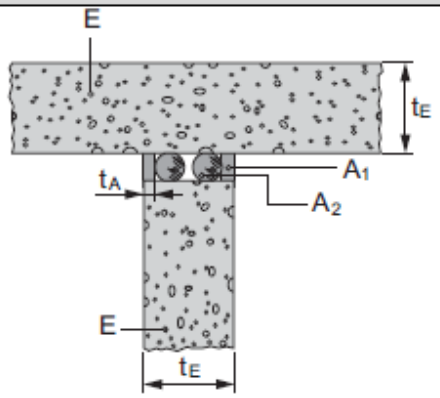
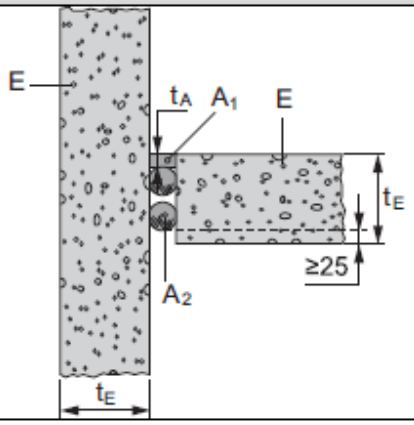
[a] t_A = 10 mm, compression of mineral wool minimum 40%

"Termarock 40" used as backfilling material

"Termarock 40" without Al-facing, CE marked according to EN 13162 or EN 14303 with a minimum density of 40 kg/m^3 from manufacturer "Deutsche Rockwool Mineralwoll GmbH & Co. OHG".

"Hilti Firestop Silicone Sealant CFS-S SIL" (A_1) together with "Hilti Firestop Round Cord CFS-CO" (A_2) as specified in Annex B.2.2 of the ETA as backfilling material:

Within rigid floor constructions (E) according to Clause 2.1 of the ETA, $t_E \geq 150$ mm, in linear joints with maximum ± 25,0% movement (only shear movement). Minimum two rod layers with an air gap between the rods and a minimum distance of 25 mm from the surfaces of the floor construction. Distance between splices in the two rod layers minimum 100 mm (if joint width ≤ 30 mm).

B	C	D
Joints in floor constructions	Horizontal joints in a wall abutting a floor, ceiling or roof	Horizontal joints in a floor abutting a wall
		

Orientation	Joint width W (mm)	Size of Hilti Firestop Round Cord CFS-CO	Classification
Joints in floor constructions (B), Horizontal joints in a wall abutting a floor, ceiling or roof (C), Horizontal joints in a floor abutting a wall (D)	12 to 17 [a]	20	EI 90-H-M 25-F-W 12 to 50
	17 to 27 [b]	30	
	27 to 37 [b]	40	
	37 to 47 [b]	50	
	47 to 50 [b]	60	

[a] t_A = 6 mm
[b] t_A = 10 mm

Hilti Firestop Round Cord CFS-CO

"Hilti Firestop Round Cord CFS-CO" is a rod made from stone wool weaved in glass fibre. It is provided in diameters of 20, 30, 40, 50 and 60 mm to accommodate various joint widths.

A detailed specification of the product is contained in document "Identification / Product Specification relating to the European technical approval ETA-10/0291 and ETA-10/0389 - Hilti Firestop Round Cord CFS-CO" which is a non-public part of this ETA.