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appointed according to Article 29 of Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020

UK Technical Assessment

0843-UKTA-22/0044 of 31/03/2023

Technical Assessment Body Issuing the UKTA:	UL International (UK) Ltd
Trade name of the construction product	Hilti Firestop Silicone Sealant CFS-S SIL
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products – Linear Joint and Gap Seals
Manufacturer	Hilti Corporation Feldkircherstrasse 100 9494 Schaan LIECHTENSTEIN
Manufacturing plant(s)	HILTI production plant CP 601S
This UK Technical Assessment contains	13 pages including Annexes A and B which form an integral part of this assessment
This UK Technical Assessment* is issued, on the basis of	EAD 350141-00-1106, September 2017

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*** in accordance with Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020**

Content

SPECIFIC PARTS OF THE UK TECHNICAL ASSESSMENT

1 Technical description of the product

Hilti Firestop Silicone Sealant CFS-S SIL is a sealant used to form a linear joint or gap seal with mineral wool or Hilti Round Cord CFS-CO as backfilling material.

Sealant	Characteristics
Hilti Firestop Silicone Sealant CFS-S SIL	Neutral elastic 1-component silicone with intumescent fire protection additives (fire protection silicone). It is delivered in various colours (grey, red, white, anthracite) in 310ml and 600ml foil packs.

Additional Components	Characteristics
Termarock 40 fire protection panel	Stone wool without Aluminium facing, classification A1 according to EN 13501-1 and a minimum density of 40kg/m^3 according to EN 13162 or EN 14303, from manufacturer "Deutsch Rockwool Mineralwoll GmbH & Co. OHG"
Hilti Firestop Round Cord CFS-CO	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.
Hilti Primer CSP 264 / Hilti Firestop Primer CFS-PRIM	1-component toluene-free solution of silicone resins intended to improve adhesion of sealants to mineral or porous building material surfaces.

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (Pre-Exit European Assessment Document): EAD 350141-00-1106

2.1 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 UKTA.

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: 2400kg/m^3 • Minimum thickness: 150mm • The rigid wall shall be classified in accordance with EN 13501-2 for at least the required fire resistance period • Maximum joint width: 100mm
Rigid Floors	• Concrete • Minimum density: 2400kg/m^3 • Minimum thickness: 150mm • The rigid floor shall be classified in accordance with EN 13501-2 for at least the required fire resistance period • Maximum joint width: 100mm

2.2 Use category

"Hilti Firestop Silicone Sealant CFS-S SIL" is intended for use in conditions exposed to weathering, and can therefore – according to clause 2.1 and clause 2.2.12.1b of EAD 350141-00-1106 – be categorized as Type X. Since the requirements for Type X are met, also the requirements for Type Y_1, Y_2, Z_1 and Z_2 are fulfilled.

2.3 Working life

The provisions made in this UK Technical Assessment are based on an assumed working life of "Hilti Firestop Silicone Sealant CFS-S SIL" of 10 years, provided the conditions laid down in the technical literature of the manufacturer relating to packaging, transport, storage, installation, use and repair are met.

The indications given on the intended working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body, but are to be regarded only as a means for selecting the appropriate product in relation to the expected economically reasonable working life of the works.

The real working life might be, in normal use conditions, considerably longer without major degradation affecting the Basic requirements for construction works.

2.4 General assumptions

It is assumed that damages to the linear joint and gap seal are repaired accordingly.

2.5 Manufacturing

The UK Technical Assessment is issued for the product on the basis of agreed data/information, deposited with UL International (UK) Ltd, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to UL International (UK) Ltd before the changes are introduced.

UL International (UK) Ltd will decide whether or not such changes affect the UK Technical Assessment and consequently the validity of the UKCA marking on the basis of the UK Technical Assessment and if so whether further Assessment or alterations to the UK Technical Assessment, shall be necessary.

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

Basic requirements for construction works	Essential characteristic	Method of verification	Performance
BWR 2	Reaction to fire	EN 13501-1	Clause 3.1.1 of this UKTA
	Resistance to fire	EN 13501-2	Clause 3.1.2 and Annex C.1 to C.5 of this UKTA
BWR 3	Air permeability	EN 1026:2000	Clause 3.2.1 of this UKTA
	Water permeability	No performance assessed	
	Content and/or release of dangerous substances	Declaration of conformity by the manufacturer	
BWR 4	Mechanical resistance and stability	No performance assessed	
	Resistance to impact/movement	No performance assessed	
	Adhesion	EN ISO 11600	Clause 3.3.3 of this UKTA
	Durability	EAD 350141-00-1106 clause 2.1 and clause 2.2.12.1b	Clause 3.3.4 of this UKTA
BWR 5	Airborne sound insulation	EN ISO 10140-1 and EN ISO 10140-2, EN ISO 717-1	Clause 3.4.1 of this UKTA
BWR 6	Thermal properties	No performance assessed	
	Water vapour permeability	No performance assessed	

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

"Hilti Firestop Silicone Sealant CFS-S SIL" is classified 'B-s2, d1' in accordance with EN 13501-1.

3.1.2 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 in conjunction with EN 1363-1, 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 in conjunction with EN 1363-1 "Hilti Firestop Silicone Sealant CFS-S SIL" has been classified according to EN 13501-2. The individual fire resistance classes are listed in Annex B.1 to B.2 of the UKTA.

3.2 Hygiene, health and environment (BWR 3)

3.2.1 Air permeability

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

Pressure (Pa)	50	250
q/A air (m^3/h)	impermeable	impermeable

3.2.2 Water permeability

No performance assessed.

3.2.3 Content, emission and/or release of dangerous substances.

The manufacturer has provided a declaration on the content, emission and/or release of dangerous substances in relation to their products with the title "Statement on Product Regulatory Compliance: Version 1.1 October 2022).

In addition to the specific clauses relating to dangerous substances contained in this UK Technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed UK legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.3 Safety and accessibility in use (BWR 4)

3.3.1 Mechanical resistance and stability

No performance assessed.

3.3.2 Resistance to impact / movement

No performance assessed.

Provisions shall be taken to prevent a person from stepping onto a horizontal penetration seal or falling against a vertical penetration seal (e.g. by covering with a wire mesh)

3.3.3 Adhesion

Adhesion is covered by tests for determining movement capability according to EN ISO 11600. The resulting classification is F-25 LM-M_1up.

3.3.4 Durability

"Hilti Firestop Silicone Sealant CFS-S SIL" fulfils the requirements for intended use category.

"Hilti Firestop Silicone Sealant CFS-S SIL" is therefore appropriate for conditions exposed to weathering and can – according to clause 2.1 and clause 2.2.12.1b of EAD 350141-00-1106 – be categorized as Type X. Since the requirements for Type X are met, also the requirements for Type Y1, Y2, Z1 and Z2 are fulfilled.

3.4 Protection against noise (BWR 5)

3.4.1 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.

"Hilti Firestop Silicone Sealant CFS-S SIL" was tested according to EAD 350141-00-1106 clause 2.2.9 with a joint width of 25 mm. The reached values for the airborne sound insulation in accordance with EN ISO 717-1:2013 are given in the following table:

$R_{s,w}$ in dB	C in dB	C_{tr} in dB
64	-2	-5

3.5 Energy economy and heat retention (BWR 6)

3.5.1 Thermal properties

No performance assessed.

3.5.2 Water vapour permeability

No performance assessed.

4 Assessment and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base

According to the Statutory Instrument 2019 No. 465 – made 5th March 2019 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and coming into force on exit day and Statutory Instrument 2020 No. 1359 – made 26th November 2020 and cited as the Construction Products (Amendment etc.) (EU Exit) Regulations 2020 and coming into force immediately before the 2019 Regulations come into force, on the procedure for attesting the conformity of construction products as regards fire stopping, fire sealing and fire protective products, published as 'Pre-Exit' European Assessment Documents, (see https://www.gov.uk/guidance/pre-exit-european-assessment-documents-construction-products), the system of assessment and verification of constancy of performance (see Annex V to Construction Products Regulation 2011 as amended by the Construction Products (Amendment etc.) (EU Exit) Regulations 2019 and the Construction Products (Amendment etc.) (EU Exit) Regulations 2020) given in the following table(s) apply.

Product(s)	Intended use(s)	Level(s) or class(es)	System
Fire Stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	any	1

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Tasks of the manufacturer:
Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed. This production control system shall ensure that the product is in conformity with this UK Technical Assessment.

The manufacturer may only use initial / raw / constituent materials stated in the technical documentation of this UK Technical Assessment.

The factory production control shall be in accordance with the Control Plan of 17/01/2022 relating to the UK Technical Assessment 0843-UKTA-22/0044 issued on TBC//2023 which is part of the technical documentation of this UK technical Assessment. The "Control Plan" is laid down in the context of the factory production control system operated by the manufacturer and deposited at UL International (UK) Ltd.

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the Control Plan.

Other tasks of the manufacturer
Additional information

The manufacturer shall provide a technical data sheet and an installation instruction with the following minimum information:
(a) Technical data sheet:

- Field of application:
- Building elements for which the linear joint and gap seal is suitable, type and properties of the building elements like minimum thickness, density, and - in case of lightweight constructions – the construction requirements.
- Limits in size, minimum thickness etc. of the linear joint and gap seal
- Construction of the linear joint and gap seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.

(b) Installation instruction:

- Steps to be followed
- Procedure in case of retrofitting
- Stipulations on maintenance, repair and replacement

Issued on: TBC 2023

Report by:

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ANNEX A: REFERENCE DOCUMENTS and LIST OF ABBREVIATIONS

A.1 References to standards mentioned in the UKTA

EN 1026	Windows and doors – Air permeability – Test method
EN 1363-1	Fire resistance tests – Part 1: General Requirements
EN 1366-4	Fire resistance tests for service installations – Part 4: Linear joint seals
EN 13162	Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification
EN 13501-1	Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
EN 13501-2	Fire classification of construction products and building elements - Part 2: Classification using test data from fire resistance tests
EN 14303	Thermal insulation products for building equipment and industrial installations -Factory made mineral wool (MW) products - Specification
EN ISO 717-1	Acoustics – Rating of sound insulation of buildings and of building elements – Part 1: Airborne sound insulation
EN ISO 10140-1	Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products
EN ISO 10140-2	Acoustics - Laboratory measurement of sound insulation of building elements -Part 2: Measurement of airborne sound insulation
ISO 11600	Building construction - Jointing products - Classification and requirements for sealants

A.2 Other reference documents

EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

A.3 Abbreviations used in drawings

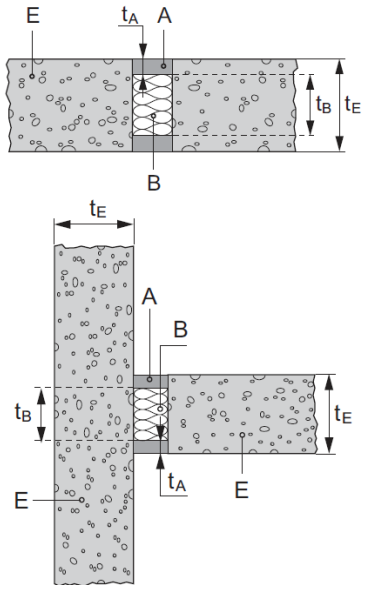
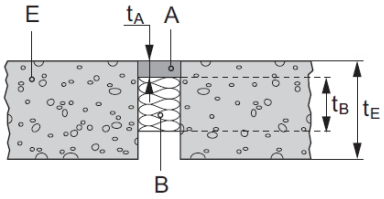
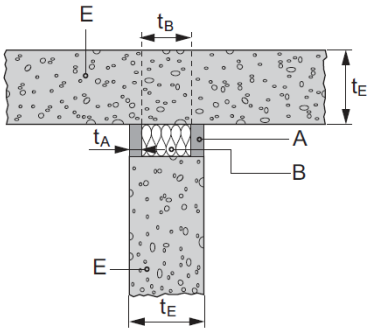
Abbreviation	Description
A, A_1	Hilti Firestop Silicone Sealant CFS-S SIL
A_2	Hilti Firestop Round Cord CFS-CO
B	Termarock 40 fire protection panel
E, E_1	Building element (wall, floor)
t_A	Thickness of Hilti Firestop Silicone Sealant CFS-S SIL
t_B	Thickness of backfilling material
t_E	Thickness of the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

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

B.1 "Hilti Firestop Silicone Sealant CFS-S SIL" (A) together with "Termarock 40" (B) as specified in Annex B.1.3 of the UKTA as backfilling material:

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

B.1.1 Within or between rigid constructions (E) according to Clause 2.1 of the UKTA of tE ≥ 150 mm in linear joints with maximum ± 25 % movement, splice distance minimum 1250mm:

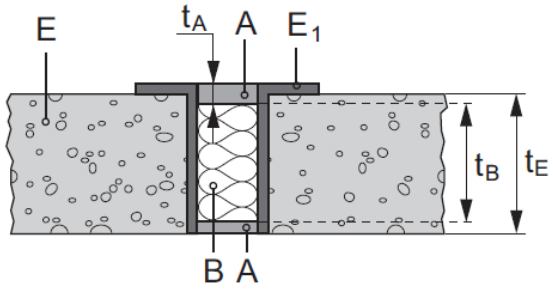
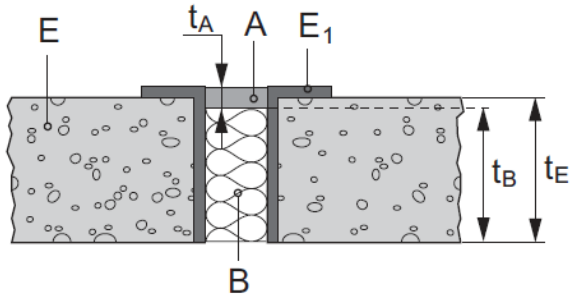
A	B	C
Vertical joints in / between wall constructions	**Joints in floor constructions**	**Horizontal joints in a wall abutting a floor, ceiling or roof**
		

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 = 6mm, compression of mineral wool minimum 60%

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

B.1.2 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, tE ≥ 150mm, tB ≥ 150mm / 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)		EI 60-H-X-F-W 6 to 30 E 240-H-X-F-W 6 to 30

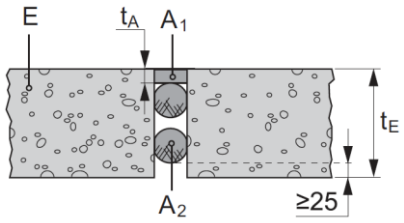
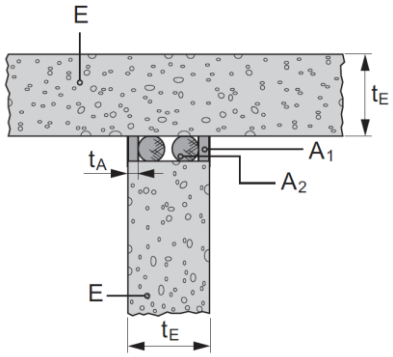
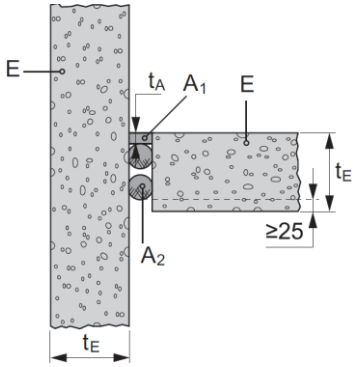
[a)] t_A = 10mm, compression of mineral wool minimum 40%

B.1.3 **"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/m3 from manufacturer "Deutsche Rockwool Mineralwoll GmbH & Co. OHG"

B.2 **"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 UKTA as backfilling material:**

B.2.1 Within rigid floor constructions (E) according to Clause 2.1 of the UKTA, tE ≥ 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 (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) and 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 = 6mm

b) t_A = 10mm

B.2.2 **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.