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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-22/0040 of 20/01/2023

Technical Assessment Body Issuing the UKTA:	UL International (UK) Ltd
Trade name of the construction product	Hilti Firestop Putty Disc CFS-D 25
Product family to which the construction product belongs	Fire Stopping and Fire Sealing Products - Penetration Seals
Manufacturer	Hilti Corporation Feldkircherstrasse 100 9494 Schaan LIECHTENSTEIN
Manufacturing plant(s)	HILTI production plant 22
This UK Technical Assessment contains	13 pages including 2 Annexes which form an integral part of this assessment.
This UK Technical Assessment* is issued, on the basis of	EAD 350454-00-1104, September 2017

*** 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

The Hilti Firestop Putty Disc CFS-D 25 is a fire sealing device in the form of a built-up self-adhesive flexible fire sealing disk.

The Hilti Firestop Putty Disc CFS-D 25 is intended for uses in environmental conditions type Y_1, Y_2, Z_1 and Z_2 according to EAD 350454-00-1104, i.e. for uses at all indoor conditions but not to rain or other forms of severe wetting.

The Hilti Firestop Putty Disc CFS-D 25 may be wrapped around cables and small tubes to seal the penetration in the construction element to prevent propagation of fire. The inlay of the disk reacts to heat and thereby prevents the spread of smoke and fire.

The, about 60 mm diameter, Hilti Firestop Putty Disc CFS-D 25 consists of a red flexible intumescent inlay, protected on both sides by a foil. The thickness of the disk is 3 mm. When the foil at the backside is removed, the disk may be wrapped around a penetrating service and pasted to the substrate to protect (see details in Annex 1).

The assumed working life of the Hilti Firestop Putty Disc CFS-D 25 is minimum 25 years, provided that the disk is subject to appropriate use and maintenance, in accordance with the manufacturer recommendations.

The Hilti Firestop Putty Discs CFS-D 25 are manufactured at Hilti Production Plant 22.

2 Specification of the intended use(s) in accordance with the applicable UK Assessment Document (Pre-Exit European Assessment Document): EAD 350454-00-1104

2.1 Intended use

Hilti Firestop Putty Disc CFS-D 25 can be used to protect penetrations through 100 mm rigid or flexible walls, as described in annex 1 of this UKTA. These penetrations may be empty or contain cables (single, multi conductor), plastic conduits and metal pipes/tubes. More details can be found in Annex 1. The maximum dimension of the opening is 25 mm (diameter or square side).

This UKTA covers construction elements installed in accordance with the provisions given in Annex 1. Other intended uses may be supported by other means at national level but are not covered by this UKTA.

2.2 Use condition

Hilti Firestop Putty Disc CFS-D 25 is intended for uses in environmental condition type Y_1, Y_2, Z_1 and Z_2 according to EAD 350454-00-1104, i.e. for uses at all indoor conditions but not to rain.

The provisions made in this UK Technical Assessment are based on an assumed intended working life of 25 years.

Indications given regarding the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, but are to be regarded only as a means for choosing the appropriate product(s) in relation to the expected economically reasonable working life of the construction works.

2.3 Assumptions under which the product was favourably assessed

2.3.1 Manufacturing directives

This UK Technical Assessment is being issued for Hilti Firestop Putty Disc CFS-D 25 on the basis of agreed data/information, deposited with the Technical Assessment Body, which characterises the product that has been assessed. Changes to the product/production process, which could result in the deposited data/information being incorrect, should be notified to the Technical Assessment Body before the changes are introduced. The Technical Assessment Body will decide whether or not such changes affect the UKTA and if so whether further assessment/alterations to the UKTA, shall be necessary.

2.3.2 Installation

The area to be sealed requires the same fire resistance as the complete wall construction. More precise instructions for the installation of Hilti Firestop Putty Disc CFS-D 25 can be found in Annex 1 of this UKTA and the technical instructions of the manufacturer.

The installation of Hilti Firestop Putty Disc CFS-D 25 includes:

- the Hilti Firestop Putty Disc CFS D 25 is wrapped around and pasted against the cable, conduit or tube;
- the disk is pasted on the wall surface, so that it covers the whole hole;
- the overlap area in the disk is mainly oriented downward;
- in case of clusters or small intermediate distances between wall opening, disks are pasted on each other;
- the disks are always installed as an entity, and never parts thereof only.

More detailed installation instructions are provided in Annex 1 of this UKTA.

2.4 Recommendations

2.4.1 Recommendations on packaging, transport, and storage

Hilti Firestop Putty Disc CFS-D 25 should be stored in dry conditions and protected from frost.

2.4.2 Recommendations on use, maintenance and repair

The addition of new services is permissible if minimum distances between the penetrations as given in Annex 1 are respected.

Any default of the disk should be immediately repaired by replacement.

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	Class E
	Resistance to fire	EN 13501-2	Annex 1 of the UKTA
BWR 3	Air permeability (material property)	No performance assessed	
	Water permeability (material property)	No performance assessed	
	Content, emission 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	No performance assessed	
	Durability	EOTA TR 024	Y_2
BWR 5	Airborne sound insulation	ISO 717-1	Rw (C; Ctr) = 62 (-2; -7) dB (for a sealed penetration with/without cable)
BWR 6	Thermal properties	No performance assessed	
	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 the applicable European Assessment Document

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 05/01/2022 relating to the UK Technical Assessment 0843-UKTA-22/0040 issued on 20/01/2023 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 penetration 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 penetration seal
- Construction of the penetration seal including the necessary components and additional products (e.g. backfilling material) with clear indication whether they are generic or specific.
- Services which the penetration seal is suitable, type and properties of the services like material, diameter, thickness etc. in case of pipes including insulation materials; necessary/allowed supports/fixings (e.g. pipe trays)

(b) Installation instruction:

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

Issued on: 20th January 2023

Report by:

C. Sweeney
Project Engineer Associate
Built Environment
For and on behalf of UL International (UK) Ltd.

Reviewed by:

C. Johnson
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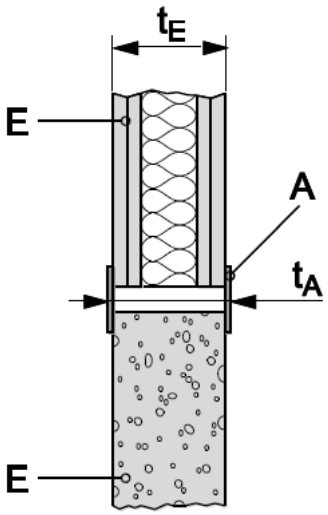
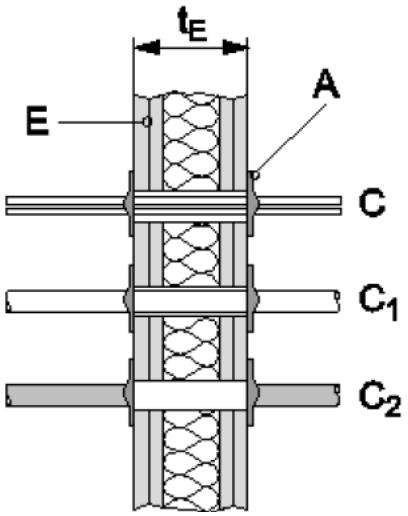
Built Environment

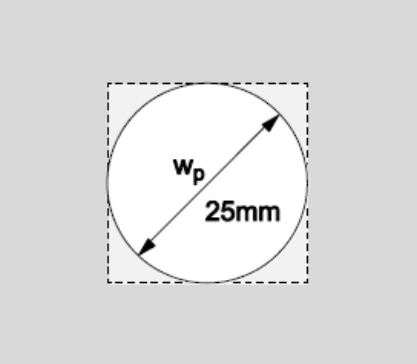
ANNEX 1: Fire resistance classification of Hilti Firestop Putty Disc CFS-D 25 used on penetrations in rigid and flexible walls

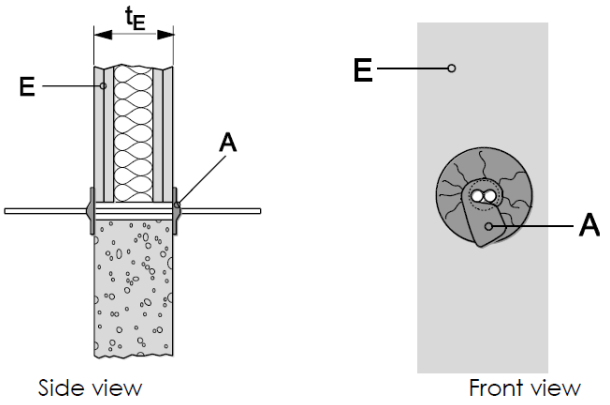
A1.0 Performance Overview			
For detailed information please refer to A1.1 and following paragraphs			
PENETRATION TYPES		**Fire Resistance Classification**	
		Flexible wall (100 mm)	**Rigid wall** (100 mm)
Empty openings When separation between wall openings of adjacent penetration seals ≥ 5mm	-	**EI 90 E 90**	
Multi-conductor cables Ø ≤ 13 mm When separation between wall openings of adjacent penetration seals ≥ 5mm	copper content: ≤ 7,5 mm²	**EI 120 E 120**	
Multi-conductor cables Ø ≤ 19 mm (except non sheathed cables (wires)) When separation between wall openings of adjacent penetration seals ≥ 5mm	copper content: ≤ 40 mm²	**EI 90 E 90**	
Single-conductor cables Ø ≤ 14 mm (except non sheathed cables (wires)) When separation between wall openings of adjacent penetration seals ≥ 5mm	copper content: ≤ 1x35 mm²	**EI 90 E 90**	
All cable types Ø ≤ 21 mm (except non sheathed cables (wires)) When separation between wall openings of adjacent penetration seals ≥ 5mm	-	**EI 60 E 90**	
Plastic conduits, Ø ≤ 16 mm When separation between wall openings of adjacent penetration seals ≥ 150 mm	wall thickness ≥ 1 mm	**EI 90 C/U E 90 C/U**	
Plastic conduits, Ø ≤ 16 mm When separation between wall openings of adjacent penetration seals ≥ 5mm	wall thickness ≥ 1 mm	**EI 60 C/U E 90 C/U**	
Copper pipes / tubes, Ø ≤ 16 mm When separation between wall openings of adjacent penetration seals ≥ 150 mm	wall thickness ≤ 1 mm	**EI 60 U/U E 120 U/U**	

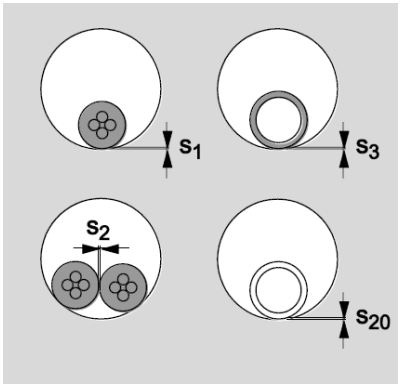
All assigned classifications cover lower classification as described in clause 7 of EN 13501-2

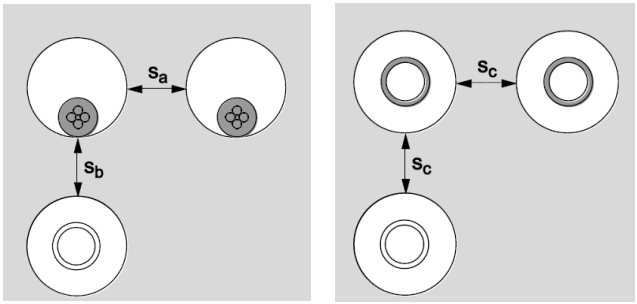
A1.1 General Information
A1.1.1 Wall Constructions
Description of a rigid wall: The fire classification results may be applied to concrete or masonry walls with a thickness equal or greater than 100 mm and a density equal or greater than 450 kg/m³ **Description of a flexible wall:** The fire classification results may be applied to all flexible wall constructions with an appropriate fire resistance classification provided: − The construction is classified in accordance with EN 13501-2; − The construction has an overall thickness equal or greater than 100; − Two layers of gypsum boards – overall board thickness: 12,5 mm - are applied on both sides of the construction − Flexible walls with timber studs are constructed with two layers of gypsum boards on both sides, no part of the penetration seal is closer than 100 mm to a stud, the cavity is closed between the penetration seal and the stud, and minimum 100 mm of insulation of class A1 or A2 according to EN 13501-1 is provided within the cavity between the penetration seal and the stud The classification covers applications with or without aperture framing. The classification does not cover sandwich panel constructions and flexible walls where the lining does not cover the studs on both sides.

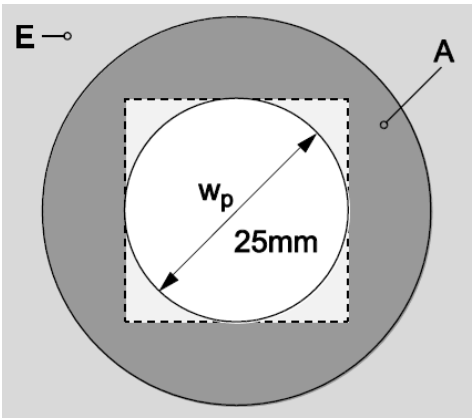
A1.1.2 Penetration	
The overall seal depth (t_A) is ≥ 100 mm. The wall has a minimum thickness of 100mm (t_E). None or several cables may be included in the wall opening as it will fit in the 625 mm² opening. The distance from the wall to the first service supporting construction is 500 mm on both sides of the wall.	
 **Figure A1: wall application and dimensions**	 **Figure A2: typical services**
A: Hilti Firestop Putty Disc CFS-D 25 E: Building element (rigid or flexible wall construction) t_A: Overall seal depth	t_E: Thickness of building element C: Cables C_1: Conduit C_2: Metal pipe/tube

A1.1.2.1 Maximum Opening Size	
Maximum opening size in the wall = 625mm² with maximum outer dimensions of 25mm x 25mm. All wall openings / shapes covered by a square of 25mm may be used. W_P: (max. opening diameter): 25 mm	 **Figure A3: maximum opening size**

A1.1.2.2 Sealing of Penetration	
• Gap between services and wall is closed by wrapping the Hilti Firestop Putty Disc CFS-D 25 around services and adhering residual disk to wall. • Opening has to be completely covered by the Hilti Firestop Putty Disc CFS-D 25 • Penetrations of cables, which exit/ penetrate wall from one side only, are sealed as standard penetration but at penetration side only.	 **Figure A4: Hilti Firestop Putty Disc CFS-D 25 application**

A1.1.2.3 Distances inside opening	
Distances valid for wall installations	
Minimum distances in mm (see illustration): $s_1 \geq 0$ (distance cables to seal edge) $s_2 \geq 0$ (distance between cables) $s_3 \geq 0$ (distance copper pipe to seal edge) $s_{20} \geq 0$ (conduits to seal edge)	 **Figure A5: distances within penetration**

A1.1.2.4 Cluster arrangement (distances between openings)	
Minimum distances in mm (see illustration): $S_a \geq 5$ (distance between openings (with/without cables, to other openings with/without cables) $S_b \geq 5$ (distance of openings with conduits to other openings with/without cables) $S_c \geq 150$ (distance of openings with copper pipes to other services) Hilti Firestop Putty Discs CFS-D 25 from nearby openings are installed by overlap.	 **Figure A6: Cluster arrangement**

A1.2 Flexible or rigid walls according to A1.1.1 – minimum wall thickness 100 mm	
A1.2.1 Blank seal (no services) *	
Construction details (for symbols and abbreviations see A.1.3 • With two Hilti Firestop Putty Discs CFS-D 25, each on one side of the wall, an overall seal deptht t_A of > 100mm is formed • W_p: 25 mm (max. opening diameter – 25 mm)	 **Figure A7: blank seal**
	Classification
Opening Size: 25 x 25 mm	**EI 90, E 90**
***** If services are added later on in a blank seal only the services listed in the tables below may be added that fulfil the required classification.	

A1.2.2 Cables		
Construction details see A1.1.2.2 None or several cables may be included in the wall opening		
All cable types currently and commonly used in building practice in Europe (e.g. power, control, signal, telecommunication, data, optical fibre cables		
All sheathed cables:		**Classification**
Multi- conductor cables ≤ Ø13 mm	copper content ≤ 7,5 mm² (e.g. 5x1,5 mm²) (cable density ≤ 5,6%)	**EI 120, E 120**
Multi- conductor cables ≤ Ø19 mm	copper content: ≤ 40 mm² (e.g. 4x10 mm²; 5x8 mm²); 10x4 mm² or information cables (20x2x0,8 mm²) (cable density ≤ 14%)	**EI 90, E 90**
Single- conductor cables Ø ≤ 14 mm	copper content: ≤ 35 mm² (e.g. 1x35 mm²); (cable density ≤ 23%)	**EI 90, E 90**
Cables Ø ≤ 21 mm		**EI 60, E 90**

A1.2.3 Small plastic conduits and tubes		
Construction details see A1.1.2.2 None or several plastic conduits or plastic tubes may be included in the wall opening		
Ø ≤ 16 mm, wall thickness ≥ 1 mm	Distance of nearby penetrations [s_c]	**Classification**
Plastic conduits and plastic tubes	≥ 5 mm	**EI 60 C/U, E 90 C/U**
Plastic conduits and plastic tubes	≥ 150 mm	**EI 90 C/U, E 90 C/U**

A1.2.4 Metal pipes		
Construction details see A1.1.2.2 Maximum one metal pipe or conduit may be included per wall opening		
Ø ≤ 16 mm, wall thickness ≤ 1 mm	Distance of nearby penetrations [s_c]	**Classification**
Metal pipes and conduits	≥ 150 mm	**EI 60 U/U, E 120 U/U**

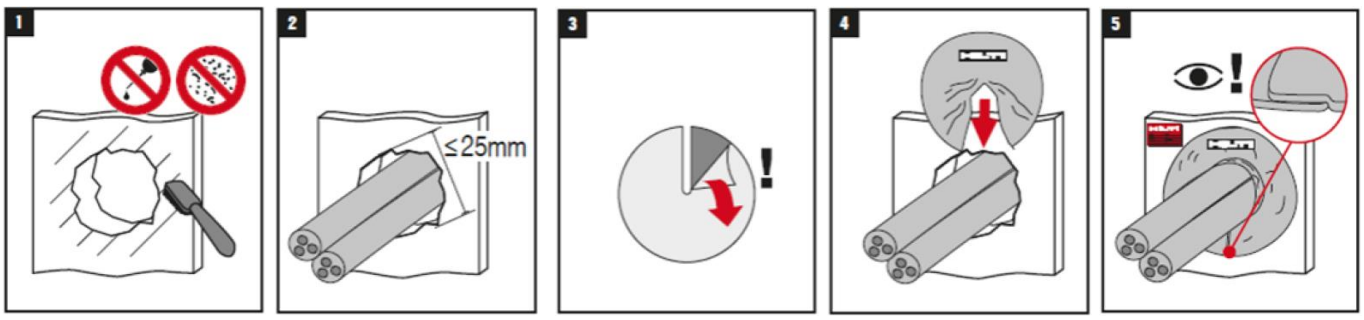


Figure A 8: Geographical presentation of the installation instructions

A1.3 Abbreviations used in drawings	
Abbreviation	**Description**
A, A_1, A_2, ...	Firestop products
C, C_1, C_2, ...	Penetrating services
E, E_1, E_2, …	Building elements (wall, floor)
s_1, s_2, s_n	Distances
Cable Density	Ratio of copper area to cable area
t_A	Overall seal depth
t_E	Thickness of the building element
W_P	Max opening diameter
Copper Content	Max. copper content at given insulation thickness

ANNEX 2: Reference Documents

EN 1366-3: 2009	Fire resistance tests for service installations – Part 3: Penetration seals
EN 13501-1+A1: 2010	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests
EN 13501-2+A1: 2010	Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services
EN ISO 717-1	Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation
EN ISO 2811-1	Paints and varnishes - Determination of density - Part 1: Pyknometer method
EOTA TR 024	Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products