

# LEISTUNGSERKLÄRUNG

gemäß Anhang III der Verordnung (EU) Nr. 305/2011 (Bauproduktenverordnung)

## Hilti Brandschutzfüllmasse CFS-FIL

Nr. Hilti CFS-FIL

**1. Eindeutiger Kenncode des Produkttyps:**

Hilti Brandschutzfüllmasse CFS-FIL

**2. Vom Hersteller vorgesehener Verwendungszweck oder vorgesehene Verwendungszwecke des Bauprodukts gemäß der anwendbaren harmonisierten technischen Spezifikation:**

Abschottungen zum Abdichten und Verschließen von Fugen und Öffnungen und zum Aufhalten von Feuer im, siehe ETA-21/0256 (26.01.2021)

Kabel- und Rohrdurchführungen	Kabel und nicht isolierte Kunststoffrohre
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**3. Name, eingetragener Handelsname oder eingetragene Marke und Kontaktanschrift des Herstellers gemäß Artikel 11 Absatz 5:**

Hilti Aktiengesellschaft, Feldkircherstrasse 100, 9494 Schaan, Fürstentum Liechtenstein

**4. AVCP System:**

System 1

**5. Europäisches Bewertungsdokument:**

EAD 350454-00-1104 "Feuerschutz- und Feuerabdichtungsprodukte - Abschottungen

**Europäische Technische Bewertung:**

ETA-21/0256 (26.01.2021))

**Technische Bewertungsstelle:**

ETA-Danmark A/S

**Benannte Stelle:**

MPA-Braunschweig, No. 0761

**6. Erklärte Leistung:**

Wesentliche Merkmale	Erklärte Leistung / Harmonisierte technische Angaben
Brandverhalten	Klasse E gemäss EN 13501-1
Feuerwiderstand	Feuerwiderstand und Anwendungsgebiet gemäß EN 13501-2. Siehe Anhang
Gefährliche Stoffe	Siehe Anhang
Luftdurchlässigkeit	Siehe Anhang
Dauerhaftigkeit und Gebrauchstauglichkeit	Y <sub>2</sub> , gem. EAD 350454-00-1104
Lärmschutz	Geprüft nach EN ISO 10140-2. R <sub>w</sub> (C; C <sub>tr</sub> ) = 63 (-3;-8) dB

Die Leistung des vorstehenden Produkts entspricht den erklärten Leistungen. Alleinverantwortlich für das Erstellen der Leistungserklärung gemäß Verordnung (EU) Nr. 305/2011 ist der obengenannte Hersteller. Unterzeichnet für den Hersteller und in dessen Namen von:

Stefan Juli  
Product Manager  
Business Unit Fire Protection  
Hilti Corporation

Martin Althof  
Head of Quality  
Business Unit Fire Protection  
Hilti Corporation

# Extract of ETA-21/0256 (26.01.2021)

## 3 Performance of the product and references to the methods used for its assessment<sup>\*)</sup>

Characteristic	Assessment of characteristic
<b>3.1 Safety in case of fire (BWR2)</b>	
Reaction to fire	The product is classified as Class E in accordance with EN 13501-1
Resistance to fire	Classification according to EN 13501-2, see Annex A for further information of fire resistant designs
<b>3.2 Hygiene, health and the environment (BWR3)</b>	
Content, emission and/or release of dangerous substances	The concentration of total emission of VOC: After 3 days: 0,18 mg/m <sup>3</sup> After 28 days: 0,06 mg/m <sup>3</sup>
Air permeability (material property)	At a pressure of 50 Pa the nominal flow rate is $\leq 2,1 \text{ E-}07 \text{ m}^3/(\text{h}\cdot\text{m}^2)$ At a pressure of 250 Pa the nominal flow rate is $\leq 1,0 \text{ E-}06 \text{ m}^3/(\text{h}\cdot\text{m}^2)$
Water Permeability (material property)	No performance assessed
<b>3.3 Safety in use (BWR4)</b>	
Mechanical resistance and stability	No performance assessed
Resistance to impact/movement	No performance assessed
Adhesion	No performance assessed
Durability	Use condition: Y <sub>2</sub>
<b>3.4 Protection against noise (BWR5)</b>	
Airborne sound insulation	R <sub>w</sub> (C; C <sub>tr</sub> ) = 63 (-3;-8) dB
<b>3.5 Energy Economy and heat retention (BWR6)</b>	
Thermal properties	No performance assessed
Water vapour permeability	No performance assessed

<sup>\*)</sup> See additional information in section 3.6 – 3.7.

## A.1 General Information

- a) Cables (up to 21mm) cover all cable types currently and commonly used in building practice in Europe except non-sheathed cables (wires), tied bundles and waveguides, optical fibre cables are covered.
- b) The classification results obtained using standard wall and floor configurations for cable penetration seals are valid for a penetration seal size equal to or smaller than tested, the maximum opening size is 60 mm. Provided the total amount of cross sections of the cables (core and insulation) does not exceed 60% of the penetration area and the working clearances are not smaller than the minimum working clearances used in the test.
- c) The maximum opening size of the pipe penetration seal is the sum of the outer diameter of the single pipe (up to 60,3 mm) and the annular sealant Hilti Firestop Filler Mastic CFS-FIL around the circular opening in walls and floors.
- d) The pipes and cables are installed perpendicular ( $90^\circ$ ) to the penetration seal.
- e) The separation between the adjacent single pipe penetration seals is  $\geq 50$  mm.
- f) The separation between adjacent multiple cable penetration seals is  $\geq 200$  mm.
- g) The first support of the service is located at maximum 250 mm away from both faces of wall constructions (separating element) and maximum 300 mm from the upper face of floor constructions (separating element)
- h) For a thicker separating element ( $t_E$ ) than given in this ETA the thickness of the penetration seal ( $t_A$ ) is increased by an equal amount
- i) The pipe end configuration U/C also covers C/C.

### A.1.1 Rigid wall constructions $t_E \geq 100$ mm

Rigid walls made of concrete, aerated concrete or masonry with a minimum density of 550 kg/m<sup>3</sup>, a minimum thickness of 100 mm.

### A.1.2 Rigid floor $t_E \geq 150$ mm

Rigid walls made of concrete, aerated concrete or masonry with a minimum density of 550 kg/m<sup>3</sup>, a minimum thickness of 150 mm.

The separating elements shall be constructed as prescribed in the EN 1366-3:2009 (see 7.2.2 standard supporting constructions)

## A.2 Penetration seal for rigid walls $\geq 100$ mm

Hilti Firestop Filler Mastic CFS-FIL(A) applied in full dept of the separating element (E), thickness ( $t_A$ )  $\geq 100$  mm.

Minimum distances between the cables (mm) acc. A.1

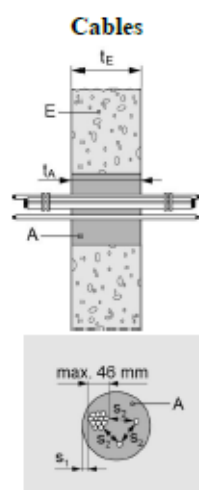
Single/multiple cable to single/multiple cable	$S_2 = 0$
Single cable or multiple cable to edge of aperture; see A.1 b)	$S_1 = 0$

Minimum distances between the penetrations (mm) acc. A.1

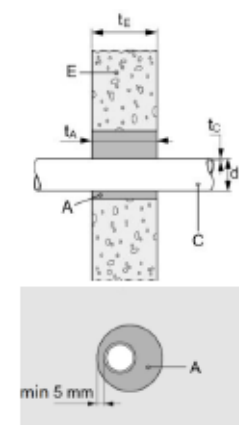
CPVC pipe to CPVC pipe penetration	50
Single/multiple cable(s) penetration to other services	200

### A.2.1 Construction details

For abbreviations see the related text and Annex Fejl! Henvisningskilde ikke fundet. of the ETA.



### Single pipe penetration



### A.2.2 Cables<sup>1</sup>

	Classification
single cable diameter up to $\varnothing 21$ mm (small cables, see A.1 a))	EI 90 E 120
multiple cables (single cable diameter max. $\varnothing 21$ mm. small cables, see A.1 a)), up to a bundle of $\varnothing 46$ mm with zero distance between the cables	EI 90 E 120

<sup>1</sup> the total amount of cross sections of the cables (core and insulation) does not exceed 60% of the penetration area acc. A.1 b)

### A.2.3 Single pipe penetrations

CPVC Blazemaster: The width of the annular gap is min 5 mm, max. 25 mm				
	Pipe		Opening size	Classification
	diameter ( $d_c$ ) [mm]	wall thickness ( $t_c$ ) [mm]	max. ( $d_c + 25$ ) [mm]	
Blazemaster 25	33,4	2,7	58,4	EI 120 U/C
Blazemaster 32	42,2	3,4	67,2	EI 120 U/C
Blazemaster 50	60,3	4,7	85,3	EI 120 U/C

CPVC Spears EverTuff: The width of the annular gap is min 5 mm, max. 25 mm				
	Pipe		Opening size	Classification
	diameter ( $d_c$ ) [mm]	wall thickness ( $t_c$ ) [mm]	max. ( $d_c + 25$ ) [mm]	
Spears EverTuff ½"	15,88	1,98	40,88	EI 120 U/C
Spears EverTuff 1"	28,58	2,85	53,58	EI 120 U/C
Spears EverTuff 2"	53,98	5,19	78,98	EI 120 U/C

### A.3 Penetration seal for rigid floors $\geq 150$ mm

Hilti Firestop Filler Mastic CFS-FIL (A) applied in full depth of the separating element (E), thickness ( $t_A$ )  $\geq 150$  mm.

Minimum distances between the services (mm) acc. A.1

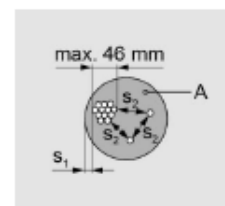
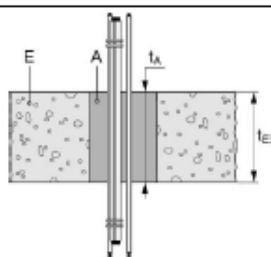
Single/multiple cable(s) to single/multiple cable(s)	$S_2 = 0$
Single/multiple cable(s) to edge of aperture; see A.1 b)	$S_1 = 0$

Minimum distances between the penetrations (mm) acc. A.1

Cable or multiple cable penetration and other services	200
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#### A.3.1 Construction details

##### Cables



For abbreviations see the related text and Annex Fejl! Henvisningskilde ikke fundet. of the ETA.

#### A.3.2 Cables<sup>2</sup>

	Classification
single cable diameter up to $\varnothing 21$ mm (small cables, see A.1 a))	EI 120
multiple cables (single cable diameter max. $\varnothing 21$ mm, small cables, see A.1 a)), up to a bundle of $\varnothing 46$ mm with zero distance between the cables	EI 120

<sup>2</sup> the total amount of cross sections of the cables (core and insulation) does not exceed 60% of the penetration area acc. A.1 b)

Abbreviation	Description drawings
A	Hilti Firestop Filler Mastic CFS-FIL
E	separating element (wall, floor)
C	penetration/service element (Pipe, cable)
$s_1, s_2$	Distances
$t_A$	Thickness (depth) of penetration seal
$t_E$	Thickness of the separating element
$d_C$	Pipe diameter (nominal outside diameter) for pipes
$t_C$	Pipe wall thickness