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European Technical Assessment

ETA-22/0321 of 31/12/2022

General Part

Technical Assessment Body issuing the European Technical Assessment:

Technical and Test Institute for Construction Prague

Trade name of the construction product VEDAFEU C

Product family to which the construction

product belongs

Manufacturer

Manufacturing plant

This European Technical Assessment contains

This European Technical Assessment is issued in accordance with regulation (EU) No. 305/2011 on the basis of

Product area code: 35

Fire stopping and fire sealing products -

Linear joint and gap seals

GV2 VEDA FRANCE

20 Allée des érables – Bât E – 93420

Villepinte - FRANCE

SFDV

29 pages including 13 Annexes which form an integral part of this assessment.

Annex No. 14 Control Plan contains confidential information and is not included in the European Technical Assessment when that assessment publicly disseminated.

European Assessment Document (EAD) 350141-00-1106

Fire stopping and fire sealing products -Linear joint and gap seals

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Specific Parts

1 Technical description of the product

Object of this European Technical Assessment (ETA) is the construction product "VEDAFEU C". The assessment of the construction product bases on the assessment document (EAD) N° 350141-00-1106 (Fire stopping and fire sealing products - Linear joint and gap seals; edition 09/2017, Official Journal of the EU N° C 435/07 of 15 December 2017; p. 157).

Component	Characteristics
"VEDAFEU C" is a firestop rope system made of mineral wool / fiberglass grid. It is produced in fourteen different diameters to accommodate various joint widths.	Ø12 mm, Ø20 mm, Ø30 mm, Ø40 mm, Ø50 mm, Ø60 mm, Ø75 mm, Ø90 mm, Ø105 mm, Ø120 mm, Ø135 mm, Ø150 mm, Ø165 mm, Ø180 mm

C	212	C20	C30	C40	C50	C60	C75	C90	C105	C120	C135	C150	C165	C180
Q	ð12	Ø20	Ø30	Ø40	Ø50	Ø60	Ø75	Ø90	Ø105	Ø120	Ø135	Ø150	Ø165	Ø180

Further product characteristics of "VEDAFEU C" are presented in Annex 1.

Details of the material specifications and processing of the components are deposited with Technical and Test Institute for Construction Prague, SOE.

Details for the design of joint seals executed by using "VEDAFEU C" are presented in Annex 2 as tested.

2 Specification of the intended uses in accordance with the applicable European Assessment Document (hereinafter EAD)

The joint seal "VEDAFEU C" is intended to be used for static and dynamic joints between reinforced concrete structures, for horizontal (slabs, head of wall) & vertical (walls) configurations

The permitted maximal width of the joints is 120 mm (compression 33 % except C12 (17 %)) and 150 mm (compression 17 %).

The acceptable width depending on the intended design is presented in Annex 2.

The joint seal is not intended for load transmission.

The performances given in section 3 are only valid if the joint seal is used in compliance with

- the specifications and conditions given in Annex 2 and
- the manufacturer's instructions as stated in section 5.

The verifications and assessment methods on which this European Technical Assessment is based lead to the assumption of a working life of "VEDAFEU C" of at least 25 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

The joint seal "VEDAFEU C" can be installed:

- Between 200 mm thick reinforced concrete slabs or walls, with a density of 2200 kg/m³.
- On head of walls, the walls being made of reinforced concrete, with a thickness of 200 mm and a density of 2200 kg/m³.

Thickness of 150 mm and 200 mm a density greater than or equal to 500 kg/m³ in autoclaved aerated concrete.

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

Table 1

Table 1						
Product-type: Mineral wool	Intended use: Linear Joint & Gap Seal					
Essential characteristic	Assessment method	Performance				
BWR 2: Safety in case of fire						
Reaction to fire	Cl. 2.2.1	Class A1 in accordance with EN 13501-1				
Resistance to fire	Cl. 2.2.2	Class EI in accordance with EN 13501-2, see Annex 2				
BWR 3: Hygiene, health	and environment	75				
Content, emission and/or release of dangerous substances	Cl. 2.2.3	No performance assessed				
Air permeability (material property)	Cl. 2.2.4	No performance assessed				
Water permeability (material property)	Cl. 2.2.5	No performance assessed				
BWR 4: Safety and acco	essibility in use					
Mechanical resistance and stability	Cl. 2.2.6	No performance assessed				
Resistance to impact/movement	Cl. 2.2.7	No performance assessed				
Adhesion	Cl. 2.2.8	No performance assessed				
Durability	Cl. 2.2.12	Y ₁				
Movement capability	Cl. 2.2.13	No performance assessed				
Cycling of perimeter seals for curtain walls	Cl. 2.2.14	No performance assessed				
Compression set	Cl. 2.2.15	No performance assessed				
Linear expansion on setting	Cl. 2.2.16	No performance assessed				
BWR 5: Protection a	gainst noise					
Airborne sound insulation	Cl. 2.2.9	$\begin{array}{c} R_{s,w} \ (C; \ C_{tr}) = 34 \ (-1; \ -2) \ dB^{\ 1)} \\ R_{s,w} \ (C; \ C_{tr}) = 36 \ (0; \ -2) \ dB^{\ 2)} \\ R_{s,w} \ (C; \ C_{tr}) = 40 \ (-1; \ -3) \ dB^{\ 3)} \\ R_{s,w} \ (C; \ C_{tr}) = 44 \ (-1; \ -4) \ dB^{\ 4), \ 5)} \end{array}$				
BWR 6: Energy economy and heat retention						
Thermal properties	Cl. 2.2.10	No performance assessed				
Water vapour permeability	Cl. 2.2.11	No performance assessed				

- 1) VEDAFEU C single joint ø 30 mm for 20 mm gap
- ²⁾ VEDAFEU C single joint ø 60 mm for 40 mm gap
- ³⁾ VEDAFEU C single joint ø 90 mm for 60 mm gap
- 4) VEDAFEU C double joint ø 30 mm for 20 mm gap
- 5) VEDAFEU C double joint ø 60 mm for 40 mm gap

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

According to the decision 1999/454/EC - Commission Decision of date 22nd June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20 (2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see https://eur-lex.europa.eu/eli/dec/1999/454/oj) of the European Commission1, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Table 2

Product	Intended use(s)	Level(s) or class(es)	Systems of assessment and verification of constancy of performance
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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited with Technical and Test Institute for Construction Prague, SOE.

The manufacturer shall provide installation instructions on every construction product according to this ETA containing at least the following information:

- type, properties (minimum thickness, diameter, length of the rope) and fire resistance of the building components with a fire-separating function in which the joint system may be installed
- description or graphic presentation of the proper installation (depending on the type of the building element, the intended fire resistance and the width of the joints).

The manufacturer shall also provide instructions on processing, packaging, transport, storage and use, maintenance and repair of the construction product.

Issued in Prague on 31/12/2022

by

Ing. Jiří Studnička, Ph.D.

Head of the Technical Assessment Body (TAB)

Annexes:

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Annex No. 1	"VEDAFEU C" - product description
Annex No. 2	Fire resistance
Annex No. 3	Dynamic – One rope installed on the unexposed face with a 17 $\%$ or 33 $\%$ compression
Annex No. 4	Static – One rope at the centre of the joint with a 33 % compression
Annex No. 5	Static – One rope at the centre of the joint with a 50 % compression
Annex No. 6	Static – One rope installed on the unexposed face with a 17 % compression
Annex No. 7	Dynamic – One rope on the exposed face and Dynamic – Two ropes on the exposed face with a 33 % compression
Annex No. 8	Static - One rope on the exposed face, with a 17 % compression
Annex No. 9	Static - One rope on the exposed face, with a 33 % compression
Annex No. 10	Static – Two ropes on the exposed face with a 33 % compression
Annex No. 11	Static – One rope installed at the centre of the joint – only for autoclaved aerated concrete with a 17 % or 33 % compression (thickness 200 mm)
Annex No. 12	Static – One rope installed at the centre of the joint – only for autoclaved aerated concrete with a 17 % or 33 % compression (thickness 150 mm)

"VEDAFEU C" – color codes and general view

Annex No. 1 "VEDAFEU C" - product description

Table shows the dimensions of the joint filling rope "VEDAFEU C" with the colour code associated. The nominal bulk density is 240 to 340 kg/m³.

Table 3: Compression rate 33 %

Reference / Model	Nominal diameter of the rope* [mm]	Initial joint width b [mm]
VEDAFEU C12	12	10
VEDAFEU C20	20	13
VEDAFEU C30	30	\$ /20
VEDAFEU C40	40	26
VEDAFEU C50	50	33
VEDAFEU C60	60	40
VEDAFEU C75	75	50
VEDAFEU C90	90	60
VEDAFEU C105	105	70
VEDAFEU C120	120	80
VEDAFEU C135	135	90
VEDAFEU C150	150/	100
VEDAFEU C165	165	110
VEDAFEU C180	180	120

^{*} nominal diameter depending on the joint width to be sealed

Table 4: Compression rate 17 %

Reference / Model	Nominal diameter of the rope* [mm]	Initial joint width b [mm]
VEDAFEU C12	12	10
VEDAFEU C20	20	16,5
VEDAFEU C30	30	25
VEDAFEU C40	40	32,5
VEDAFEU C50	50	41,5
VEDAFEU C60	60	50
VEDAFEU C75	75	62,5
VEDAFEU C90	90	75
VEDAFEU C105	105	87,5
VEDAFEU C120	120	100
VEDAFEU C135	135	112,5
VEDAFEU C150	150	125
VEDAFEU C165	165	137,5
VEDAFEU C180	180	150

^{*} nominal diameter depending on the joint width to be sealed

Table 5: Compression rate 50 %

Reference / Model	Nominal diameter of the rope* [mm]	Initial joint width b [mm]
VEDAFEU C20	20	10
VEDAFEU C30	30	15
VEDAFEU C40	40	20
VEDAFEU C50	50	25
VEDAFEU C60	60	30
VEDAFEU C75	75	32,5
VEDAFEU C90	90	45
VEDAFEU C105	105	52,5
VEDAFEU C120	120	60
VEDAFEU C135	135	67,5
VEDAFEU C150	150	75
VEDAFEU C165	165	82,5
VEDAFEU C180	180	90

^{*} nominal diameter depending on the joint width to be sealed

Table 6: Information on the additional components of the tested joint sealing:

Designation	Reference	Material	Characteristics	Supplier		
	Installation accessories					
Adhesive	VEDACOLLE	Refractory adhesive with binding agent	The nominal bulk density is 1600 kg/m³ Reaction to fire class in accordance with EN 13501-1: Class A1	GV2 Veda France		
Linking material	VEDAFEÜ linking material	Silica felt	The nominal bulk density is 150 kg/m³ Reaction to fire class in accordance with EN 13501-1: Class A1 Thickness: 6 mm	GV2 Veda France		
Sealant	VEDAFLEX SIL F	Sealant	Single component neutral sealant The density is 1.25 kg/l Reaction to fire class in accordance with EN 13501-1: NPA	GV2 Veda France		

Designation	Reference	Material	Characteristics	Supplier		
	Other accessories					
Sealant	PIROFOC	Sealant	Single component neutral sealant The density is 1.25 kg/l Reaction to fire class in accordance with EN 13501-1: Class B-s3, d0	GV2 Veda France		
Joint Cover	CJP – Aluminium	Alu. 1050	Thickness: 1.5 mm	GV2 Veda France		
Joint Cover	CJP – Stainless Steel	SS304	Thickness: 2.0 mm	GV2 Veda France		
Waterproofing membrane	Ved'EPDM	EPDM	The density is 1.23 kg/l Reaction to fire class in accordance with EN 13501-1: Class E (adhesive affixed) or Class F (other installation method) Thickness: 1.5 mm Width: 300 mm	GV2 Veda France		

VEDACOLLE adhesive is required for some of the configurations. The adhesive consumption is detailed in the below tables:

Table 7

Reference / Model	Nominal diameter of the rope [mm]	Adhesive consumption for 33 % compression grams [g/lm]*	Adhesive consumption for 17 % compression grams [g/lm]*
VEDAFEU C12	12	110	1200
VEDAFEU C20	20	180	1200
VEDAFEU C30	30	220	1200
VEDAFEU C40	40	260	1200
VEDAFEU C50	50	310	1200
VEDAFEU C60	60	350	1200
VEDAFEU C75	75	415	1200
VEDAFEU C90	90	540	1200
VEDAFEU C105	105	545	1200
VEDAFEU C120	120	610	1200
VEDAFEU C135	135	675	1200
VEDAFEU C150	150	740	1200
VEDAFEU C165	165	800	1200
VEDAFEU C180	180	840	1200

^{*} adhesive consumption is given in g/lm of rope to install. It means that for a consumption of 100 g/lm, 50 g have to be installed on each side of the joint, on 1 linear meter.

Annex No. 2 Fire resistance

The fire resistance classification is related to a linear gap seal system, for static and dynamic joints between 200 mm thick reinforced concrete structures, for horizontal (slabs) & vertical (walls) configurations.

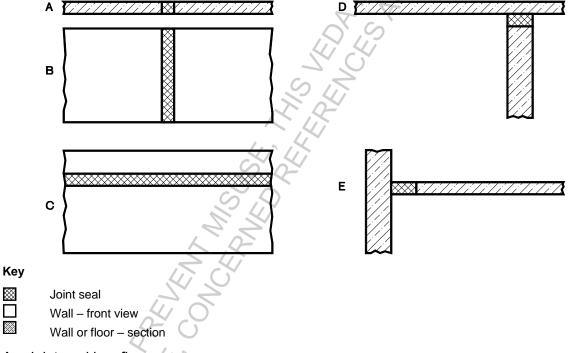
The joint seal "VEDAFEU C" can be installed:

- Between 200 mm thick reinforced concrete slabs or walls, with a density of 2200 kg/m³.
- On head of walls, the walls being made of reinforced concrete, with a thickness of 200 mm and a density of 2200 kg/m³.
- Thickness of 150 mm and 200 mm a density greater than or equal to 500 kg/m³ in autoclaved aerated concrete.

The separating building elements shall be classified according to EN 13501-2 for the required fire resistance period.

The joint filling rope "VEDAFEU C" is according to Figure 1 used

- Joint seal in a floor (A)
- Vertical joint seal in a wall (B)
- Horizontal wall joint abutting a floor, ceiling or roof (D)



A...Joint seal in a floor

- B...Vertical joint seal in a wall
- C...Horizontal joint seal in a wall
- D...Horizontal wall joint abutting a floor, ceiling or roof
- E...Horizontal floor joint abutting a wall

Figure 1 – Possible orientations of linear joint seals

The classifications indicated in Annex 2 of this ETA are only valid for the positions in which the linear gap seal was tested:

- <u>Dynamic – One rope installed on the unexposed face with a 17 % or 33 % compression</u> (Table 8)

Position No. 3, as per the below drawings

Note: when the diameter of the rope is > to 135 mm and the rope is installed on a 200 mm thick support, the rope totally fills the gap, as per position No. 1.

- Static – One rope at the centre of the joint with a 33 % compression (Table 9)

Position No. 5, as per the below drawings

- Static - One rope at the centre of the joint with a 50 % compression (Table 10)

Position No. 5, as per the below drawings

- Static - One rope installed on the unexposed face with a 17 % compression (Table 11)

Position No. 3, as per the below drawings

Note: when the diameter of the rope is > to 135 mm and the rope is installed on a 200 mm thick support, the rope totally fills the gap, as per position No. 1.

- Dynamic – One rope on the exposed face with a 33 % compression (Table 12)

For the position for which the linear gap seal was tested, i.e.: position No. 2 and positions No. 5 and 3 as per the figure No. 2, as per the below drawings

- Dynamic – Two ropes on the exposed face with a 33 % compression (Table 13)

For the position for which the linear gap seal was tested, i.e.: position No. 2 and positions No. 5 and 3 as per the figure No. 2, as per the below drawings

- Static - One rope on the exposed face with a 17 % compression (Table 14)

For the position for which the linear gap seal was tested, i.e.: position No. 2 and positions No. 5 and 3 as per the figure No. 2, as per the below drawings

- Static - One rope on the exposed face with a 33 % compression (Table 15)

For the position for which the linear gap seal was tested, i.e.: position No. 2 and positions No. 5 and 3 as per the figure No. 2, as per the below drawings

- Static – Two ropes on the exposed face with a 33 % compression (Table 16)

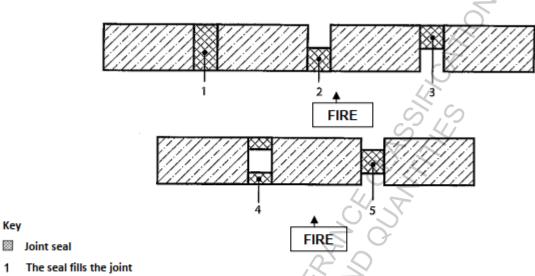
For the position for which the linear gap seal was tested, i.e.: position No. 2 and positions No. 5 and 3 as per the figure No. 2, as per the below drawings

- Static - One rope at the centre of the joint (Table 17) - only for autoclaved aerated concrete with a 17 % or 33 % compression (thickness 200 mm)

Position No. 5, as per the below drawings

- Static - One rope at the centre of the joint (Table 18) - only for autoclaved aerated concrete with a 17 % or 33 % compression (thickness 150 mm)

Position No. 5, as per the below drawings



- 1
- 2 The seal is located at the bottom of the joint
- The seal is located at the top of the joint 3
- 'S 010-0458" 4 The joint seal forms one of more air cavities
 - The seal is centred in the joint

Figure 2 – Examples of seal position in a joint

Design and arrangement of the joint filling rope

The joint filling ropes shall be arranged overlapped. For joints

- with a single-layer arrangement the joint filling ropes shall overlap a minimum of 100 mm (only for Ø12 mm), for all other diameters the ropes are connected end to end and rolled-up with Vedafeu linking material.
- with a multi-layer arrangement (two ropes on the exposed face (Table 13 and 16)) the connection of the joints of the joint filling rope (superior and inferior) shall be arranged 500 mm shifted to each other.

For arrangement and number of layers of the joint filling rope, see Tables 8 to Table 18.

For the choice of the suitable joint filling rope (nominal diameter depending on the joint width to be sealed) see Table 3, 4 and 5.

Table 8 (see Annex No. 3)

Dy	Dynamic – One rope installed on the unexposed face with a 17 % or 33 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance		
(A) (B) (D)	10 to 120	Configurations: horizontal, head-of-wall and vertical Firestop ropes VEDAFEU C12 to C180 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: - 16.67 % for the firestop rope VEDAFEU C12 - 33.33 % for all the other ropes of the range (VEDAFEU C20 to C180) Movement capacity: +20.0 % opening movement Position of the seal: flush with the unexposed face or installed with a recess of max. 20 mm from the unexposed face.	EI 240-V-M 20-B-W 10 to 120 * EI 240-H-M 20-B-W 10 to 120 *		

Table 9 (see Annex No. 4)

Table 10 (see Annex No. 5)

Static – One rope installed at the centre of the joint with a 50 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance	
(A) (D)	10 to 60	Configurations: horizontal, head-of-wall Firestop ropes VEDAFEU C20 to C180 Adhesive is not mandatory Compression rates: 50 % Movement capacity: up to +7.5 % opening Position of the seal: at the centre of the joint.	Without accessories: EI 180-H-X-B-W 10 to 60 * With accessories: EI 120-H-X-B-W 10 to 60 *	
(B)	20 to 90	Configurations: vertical Firestop ropes VEDAFEU C20 to C180 Adhesive is not mandatory Compression rates: 50 % Movement capacity: up to +7.5 % opening Position of the seal: at the centre of the joint.	Without accessories: EI 180-V-X-B-W 20 to 90 * With accessories: EI 120-V-X-B-W 20 to 90 *	

Table 11 (see Annex No. 6)

-	- Static – One rope installed on the unexposed face with a 17 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance		
(A) (B) (D)	50 to 150	Configurations: horizontal, head-of-wall and vertical Firestop ropes VEDAFEU C60 to C180 Adhesive is applied on both sides of the joint: - 545 g/ml (on 1 linear meter of joint) for VEDAFEU C60 up to C90 - 840 g/ml (on 1 linear meter of joint) for VEDAFEU C90 up to C180 VEDAFEU C compression rates: 16.67 % Movement capacity: +7.5 % opening movement Position of the seal: flush with the unexposed face or installed with a recess of max. 20mm from the unexposed face.	EI 120-V-X-B-W 50 to 75 * EI 240-V-X-B-W 75 to 150 * EI 120-H-X-B-W 50 to 150 *		

Table 12 (see Annex No. 7)

	Dynamic – One rope on the exposed face with a 33% compression					
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance			
(A) (D)	80 to 120	Configurations: horizontal, head-of-wall Firestop ropes VEDAFEU C120 to C180 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 33.33 % Movement capacity: +20.0 % opening movement Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: flush with the exposed face (considering the thickness of the sealant).	EI 120-H-M 20-B-W 80 to 120*			

Table 13 (see Annex No. 7)

Dynamic – Two ropes on the exposed face with a 33% compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance	
(A) (D)	20 to 60	Configurations: horizontal, head-of-wall Firestop ropes VEDAFEU C30 to C90 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 33.33 % Movement capacity: +20.0 % opening movement Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: double ropes flush with the exposed face (considering the thickness of the sealant).	EI 120-H-M 20-B-W 20 to 60*	

Table 14 (see Annex No. 8)

application	joint width		
	[mm]	VEDAFEU C arrangement	classification fire resistand
(A) (D)	50 to 150	Configurations: horizontal, head-of-wall Firestop ropes VEDAFEU C60 to C180 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 16.67 % Movement capacity: up to +7.5 % opening Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: flush with the exposed face (considering the thickness of the sealant).	EI 240-H-X-B-W 50 to 150
(B) (B)	80 to 150	Configurations: vertical Firestop ropes VEDAFEU C60 to C180 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 16.67 % Movement capacity: up to +7.5 % opening Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: flush with the exposed face (considering the thickness of the sealant).	EI 180-V-X-B-W 80 to 150

Table 15 (see Annex No. 9)

	Static – One rope, on the exposed face, with a 33 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance		
(B)	80 to 120	Configurations: vertical Firestop ropes VEDAFEU C120 to C180 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 33.33 % Movement capacity: up to +7.5 % opening Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: flush with the exposed face (considering the thickness of the sealant).	Without accessories: EI 240-V-X-B-W 80 to 120* With accessories: EI 120-V-X-B-W 80 to 120*		

Table 16 (see Annex No. 10)

	Static – Two ropes, on the exposed face, with a 33 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance		
(B)	20 to 60	Configurations: vertical Firestop ropes VEDAFEU C30 to C90 Adhesive is applied on both sides of the joint: refer to Table 7 Compression rates: 33.33 % Movement capacity: up to +7.5 % opening Mandatory sealant: VEDAFLEX SIL F or PIROFOC, applied on the side exposed to fire, with a thickness of min. 1.5 mm Position of the seal: flush with the exposed face (considering the thickness of the sealant).	EI 120-V-X-B-W 20 to 60*		

Table 17 (see Annex No. 11)

Static – One rope installed at the centre of the joint – only for autoclaved aerated concrete					
	- thickness 200 mm - with a 17 % or 33 % compression				
	modicas 200 mm with a 17 70 of 30 70 compression				
application	joint width	VEDAEELL C arrangement	classification fire resistance		
	[mm]	VEDAFEU C arrangement	ciassification file resistance		
		Configurations: horizontal & head-of-wall			
	~	Firestop ropes VEDAFEU C12 to C180			
	,0	Adhesive is not mandatory			
	1	Compression rates:			
(A) (D)	10 to 120	- 17 % for the firestop rope VEDAFEU C12	EI 240-H-X-B-W 10 to 120*		
	7, _	- 33 % for all the other ropes of the range (C20			
	÷ 20	to C180)			
	.0	Movement capacity: up to +7.5 % opening			
	5	Position of the seal: at the centre of the joint.			

Table 18 (see Annex No. 12)

Static – One rope installed at the centre of the joint – only for autoclaved aerated concrete – thickness 150 mm - with a 17 % or 33 % compression				
application	joint width [mm]	VEDAFEU C arrangement	classification fire resistance	
(A) (D)	10 to 90	Configurations: horizontal & head-of-wall Firestop ropes VEDAFEU C12 to C135 Adhesive is not mandatory Compression rates: - 17 % for the firestop rope VEDAFEU C12 - 33 % for all the other ropes of the range (VEDAFEU C20 to C135) Movement capacity: up to +7.5 % opening Position of the seal: at the centre of the joint.	EI 240-H-X-B-W 10 to 90*	

NOTE: *V: vertical linear joint in vertical testing construction

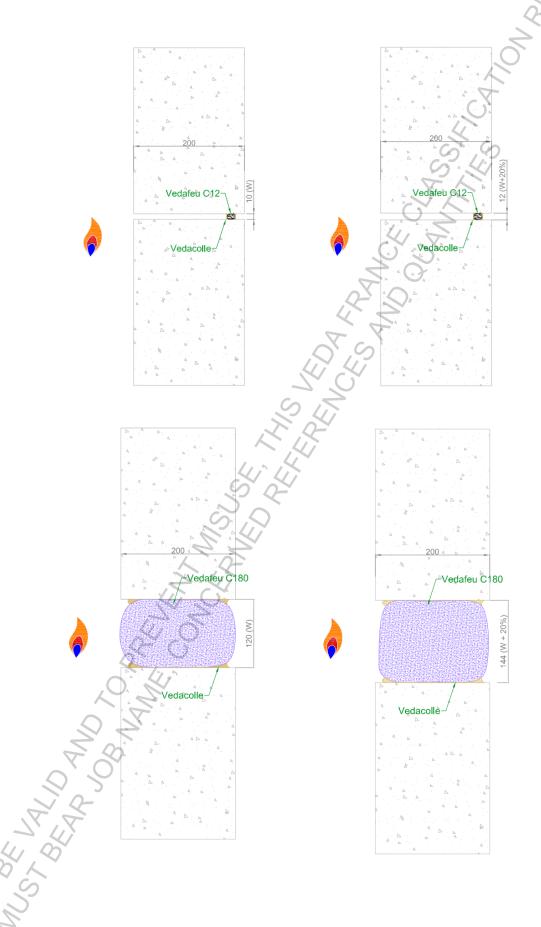
^{*}H: horizontal linear joint in a horizontal testing construction

^{*}X: no movement (7.5%)

^{*}M: movement capacity in % of the initial gap

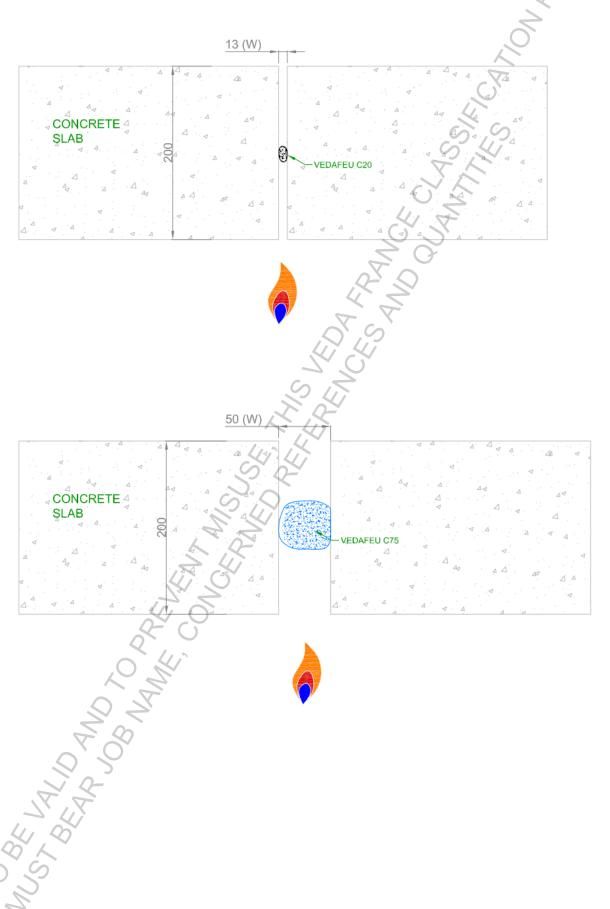
^{*}B: junctions are made in factory and on site (the necessary material is manufactured in factory and is installed on site).

Annex No. 3 Dynamic – One rope installed on the unexposed face with a 17 % or 33 % compression (Table 8)

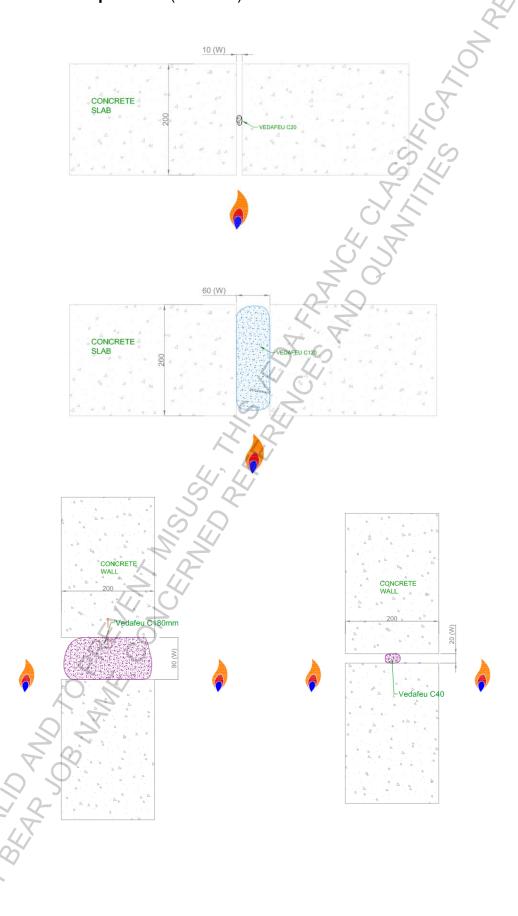


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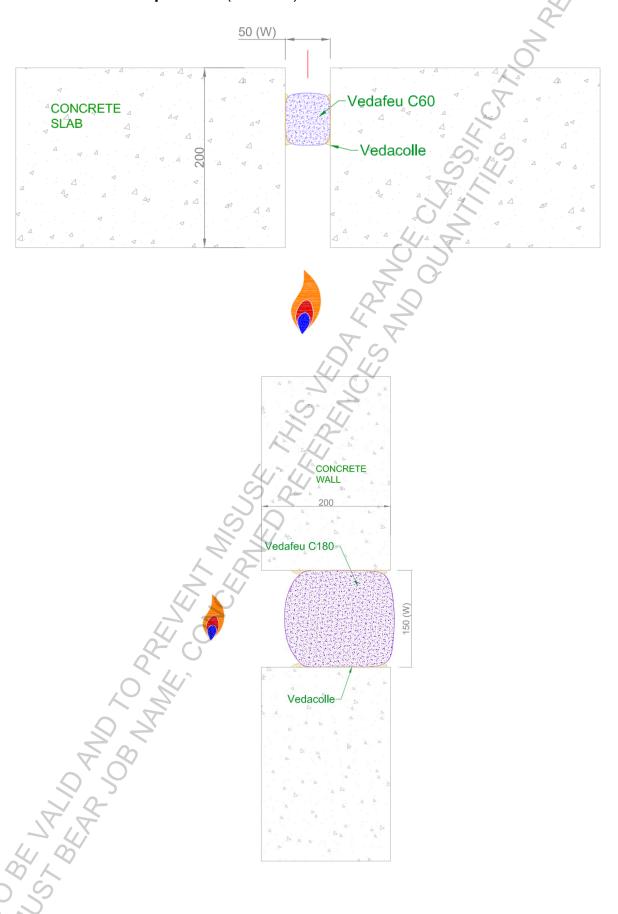
Annex No. 4 Static – One rope at the centre of the joint with a 33 % compression (Table 9)



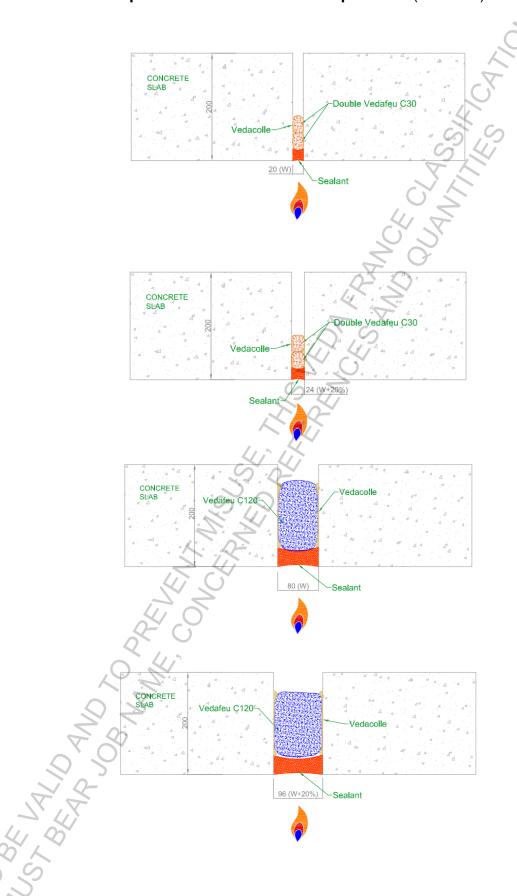
Annex No. 5 Static - One rope at the centre of the joint with a 50 % compression (Table 10)



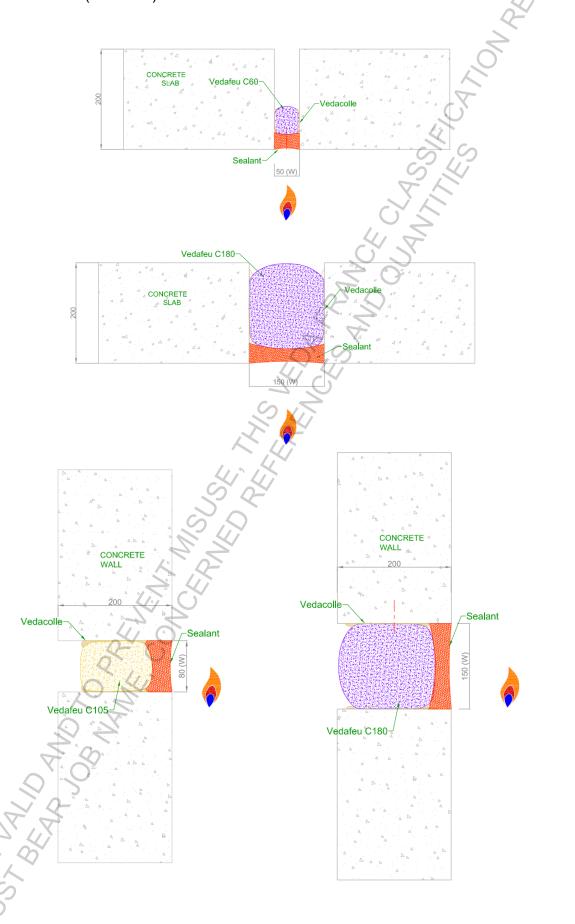
Annex No. 6 Static – One rope installed on the unexposed face with a 17 % compression (Table 11)



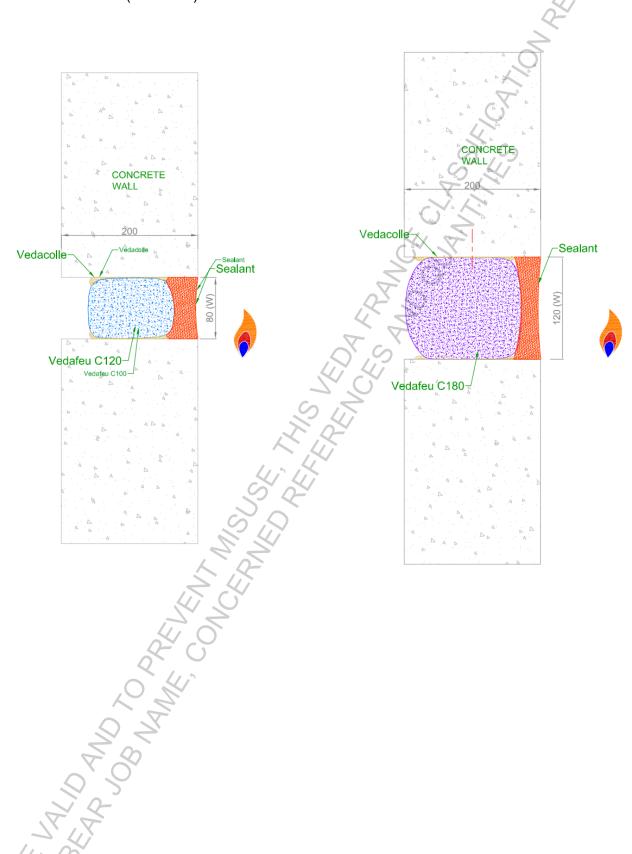
Annex No. 7 Dynamic – One rope on the exposed face with a 33 % compression (Table 12) and Dynamic – Two ropes on the exposed face with a 33 % compression (Table 13)



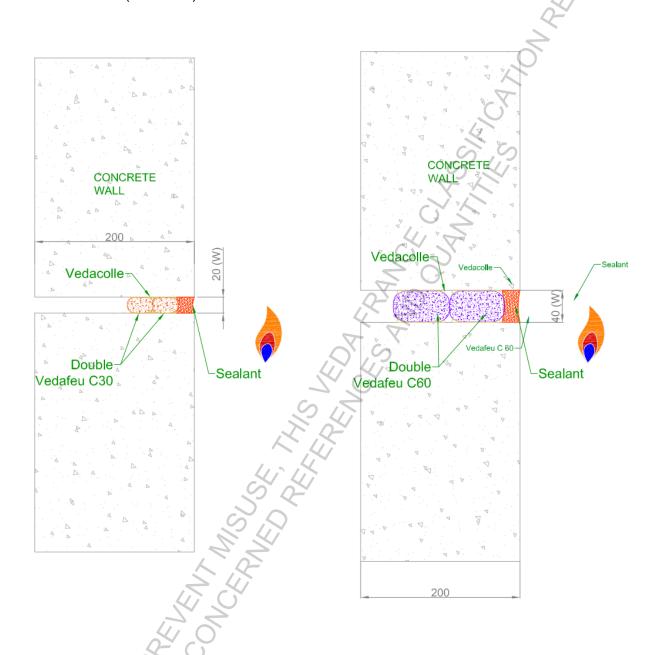
Annex No. 8 Static – One rope on the exposed face, with a 17 % compression (Table 14)



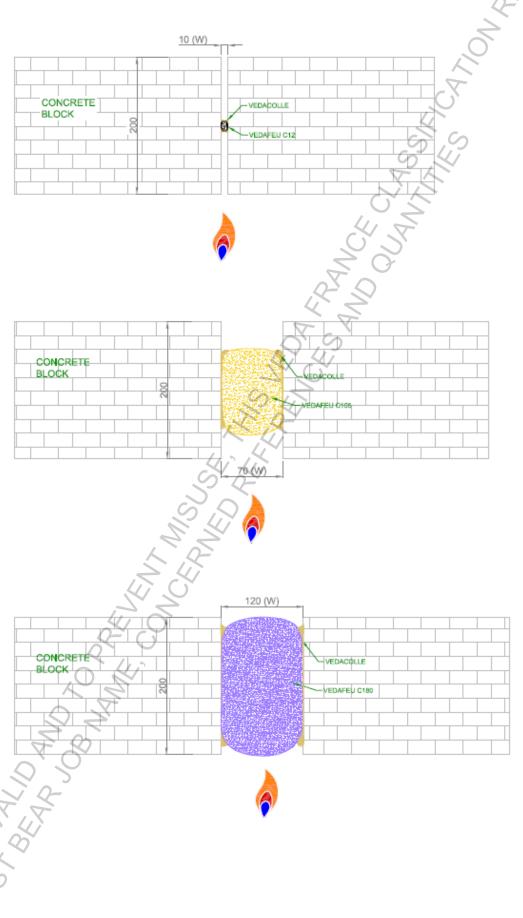
Annex No. 9 Static – One rope on the exposed face with a 33 % compression (Table 15)



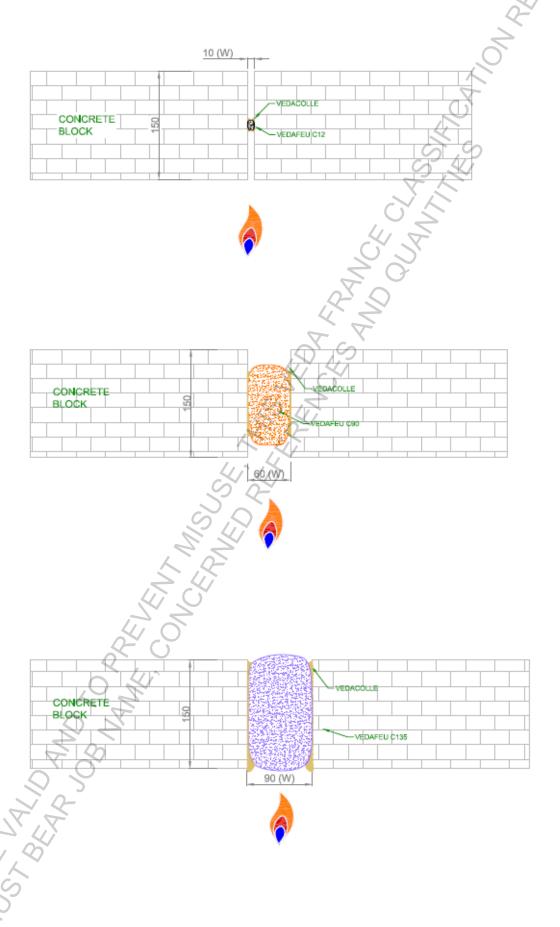
Annex No. 10 Static – Two ropes on the exposed face with a 33 % compression (Table 16)



Annex No. 11 Static – One rope installed at the centre of the joint with a 17 % or 33 % compression (Table 17)



Annex No. 12 Static – One rope installed at the centre of the joint with a 17 % or 33 % compression (Table 18)



Annex No. 13 "VEDAFEU C" - color codes and general view

