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Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-18/0378 of 2018/08/07

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 66 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product:	"ISO-FLAME KOMBI F120"
Product family to which the above construction product belongs:	Fire Stopping and Fire Sealing Products
Manufacturer:	ISO Chemie GmbH Röntgenstraße 12 D-73431 Aalen Tel.: +49 (0)7361 94 90 00 Fax: +49 (0)7361 94 90 95 www.iso-chemie.de
Manufacturing plant:	ISO Chemie GmbH Röntgenstraße 12 D-73431 Aalen
This European Technical Assessment contains:	15 pages including 7 annexes which form an integral part of the document
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, based on:	EAD 350141-00-1106 for Linear joint and gap seals
This version replaces:	**-**

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.

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II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of product and intended use

Technical description of the product
The joint sealing "ISO-FLAME KOMBI F120" is a pre-compressed PU-foam, which is impregnated with inorganic fillers and a water based acrylic binder. As fixing help on the construction element, a self-adhesive foil is placed on one side. In case of fire, the foil can intumescent for closing small gaps/wrinkles or uneven surfaces.

Detailed specifications for identification and performance criteria for fire safety regarding the construction products are given in ANNEXES.

2 Specification of the intended use in accordance with the applicable EAD

ISO-FLAME KOMBI F120 is suitable for the sealing of joints and connections in buildings, 7 dimensions for closing joints from 4 up to 40 mm.

Its usages range from sealing fire protection, with a fire resistance classes of EI 30 to EI 120, for joints in walls ceilings and connections between wall and ceiling through to building segments such as:

- Solid constructions
- Pre-fabricated constructions
- Wall partitioning constructions
- Weather-proof joints in connection with ISO-BLOCO 600 & 300.
- Waterproof joints in connection with ISO-CONNECT FAÇADE SEAL.

The joint sealing system is to be installed according to the manufacturers installation manual.

The product is delivered in pre-compressed rolls with one-sided intumescing (expands in case of fire) self-adhesive (assists application)

The provisions made in this European Technical Assessment are based on an assumed intended working life of the "ISO-FLAME KOMBI F120" of 10 years, provided the manufacturers conditions for the packaging, transport, storage, installation, use, maintenance and repair are met.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, 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.

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

Characteristic	Assessment of characteristic
3.1 Safety in case of fire (BWR2)	
Reaction to fire	The product is classified as Euroclass E in accordance with EN13501-1, and the EC Delegated regulation 2016/364/EU. Class E according to EN 13501-1
Resistance to fire	Classification according to EN 13501-2 See Annex A for combinations and further information
3.2 Hygiene, health and the environment (BWR3)	
Air permeability	No Performance Assessed
Water permeability	No Performance Assessed
Release of dangerous substances	No Performance Assessed
3.3 Safety in use (BWR4)	
Mechanical resistance and stability	No Performance Assessed
Resistance to impact/movement	No Performance Assessed
Adhesion	No Performance Assessed
3.4 Protection against noise (BWR5)	
Airborne Sound insulation	Compression ratio 28,6%: $R_{s,w}$ (C; C_{tr}) ≥ 61 (-3; -3) dB according to EN 10140-3 Compression ratio 40%: $R_{s,w}$ (C; C_{tr}) = 45 (0; 0) dB according to EN 10140-3
Impact Sound insulation	Compression ratio 28,6%: $D_{n,e,w}$ (C; C_{tr}) = 71 (-1; -4) dB according to EN 10140-3 Compression ratio 40%: $D_{n,e,w}$ (C; C_{tr}) = 55 (0; 0) dB according to EN 10140-3
3.5 Energy economy and heat retention (BWR6)	
Thermal properties	No Performance Assessed
Water vapour permeability	No Performance Assessed

Characteristic	Assessment of characteristic
3.6 General aspects relating to fitness for use	
Durability and serviceability	Durability for Reactive Materials tested according to EOTA-TR24 Mean value for restoring assets: 33,6 mm Mean value for deviation of restoring assets: 14,2% See Annex B for further information

*) See additional information in section 3.7 – 3.8.

3.7 Methods of verification

The characteristic values of the joint sealing system are based on the EAD 350141-00-1106 for Linear joint and gap seals.

3.8 General aspects related to the fitness for use of the product

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Danmark, 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 ETA-Danmark before the changes are introduced. ETA-Danmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

"ISO-FLAME KOMBI F120" are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Attestation and verification of constancy of performance (AVCP)

4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, as amended, the system(s) of assessment and verification of constancy of performance is system 1 (see Annex V to Regulation (EU) No 305/2011).

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

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking

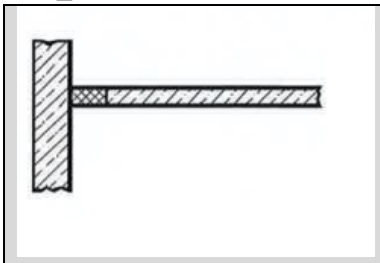
Issued in Copenhagen on 2018-08-07 by

Thomas Bruun
Managing Director, ETA-Danmark

Annex A
Fire resistant classifications evaluated by this European Technical Assessment

Overview of the permitted fire-resistant designs with regards of resistance to fire:

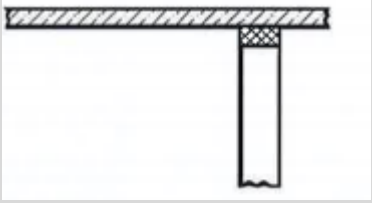
Table 2.0 provides an overview of the classification of the joint systems arranged on one side in an aerated concrete floor, t ≥ 150 mm:



Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
4	≥ 1 x 40	EI 180-H-X-F-W4 E 180-H-X-F-W4
5 ≤ b ≤ 14	≥ 1 x 40	EI 45-H-X-F-W5 to 14 E60-H-X-F-W5 to 14
15 ≤ b ≤ 20	≥ 1 x 40	EI 45-H-X-F-W 15 to 20 E 45-H-X-F-W 15 to 20
21 ≤ b ≤ 40*	≥ 1 x 50	EI 30-H-X-F-W 21 to 40 E 30-H-X-F-W 21 to 40
4	≥ 1 x 80	EI 180-H-X-F-W4 E 180-H-X-F-W4
5 ≤ b ≤ 14	≥ 1 x 80	EI 120-H-X-F-W5 to 14 E 180-H-X-F-W5 to 14
15 ≤ b ≤ 20	≥ 1 x 80	EI 120-H-X-F-W15 to 20 E 120-H-X-F-W15 to 20
21 ≤ b ≤ 40	≥ 1 x 100	EI 120-H-X-F-W21 to 40 E 120-H-X-F-W21 to 40

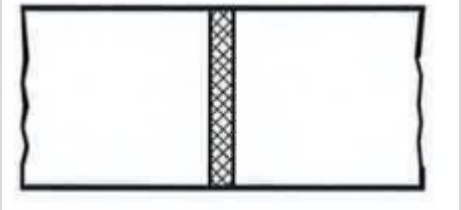
*With silicone coating

Table 2.1 provides an overview of the classification of the joint systems arranged on both sides in an aerated concrete floor/wall, t ≥ 150 mm:



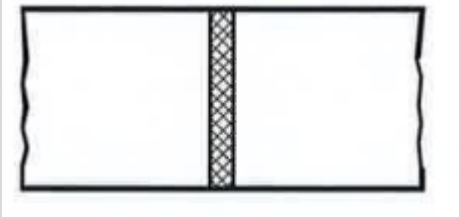
Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
4	≥ 2 x 40	EI 180-V-X-F-W4 E 180-V-X-F-W4
5 ≤ b ≤ 14	≥ 2 x 40	EI 45-V-X-F-W5 to 14 E60-V-X-F-W5 to 14
15 ≤ b ≤ 20	≥ 2 x 40	EI 45-V-X-F-W 15 to 20 E 45-V-X-F-W 15 to 20
21 ≤ b ≤ 40	≥ 2 x 50	EI 180- V-X-F-W21 to 40 E 180- V-X-F-W21 to 40
4 ≤ b ≤ 14	≥ 2 x 40	EI 120H-X-F-W4 to 14 E 120H-X-F-W4 to 14
15 ≤ b ≤ 20	≥ 2 x 40	EI 120-H-X-F-W15 to 20 E 120-H-X-F-W15 to 20
21 ≤ b ≤ 40	≥ 2 x 50	EI 120-H-X-F-W21 to 40 E 120-H-X-F-W21 to 40

Table 2.2 provides an overview of the classification of the joint systems arranged on both sides in an aerated concrete wall, t ≥ 100 mm:



Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
4	≥ 2 x 30	EI 120-V-X-F-W4 E 180-V-X-F-W4
5 ≤ b ≤ 14	≥ 2 x 30	EI 60-V-X-F-W5 to 14 E180-V-X-F-W5 to 14
15 ≤ b ≤ 20	≥ 2 x 30	EI 90-V-X-F-W 15 to 20 E 120-V-X-F-W 15 to 20
21 ≤ b ≤ 40	≥ 2 x 30	EI 45- V-X-F-W21 to 40 E 60- V-X-F-W21 to 40

Table 2.3 provides an overview of the classification of the joint systems arranged on both sides in wooden wall, t ≥ 120 mm:

	Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
	4 ≤ b ≤ 20	≥ 2 x 25	EI 30-V-X-F-W4 to 20 EI30-H-X-F-W4 to 20
	21 ≤ b ≤ 40	≥ 2 x 30	EI 30-V-X-F-W 21 to 40 EI 30-H-X-F-W 21 to 40
	4 ≤ b ≤ 14*	≥ 2 x 20	EI 30-V-X-F-W4 to 14 EI 30-H-X-F-W4 to 14

*with wooden list covering

Table 2.4 provides an overview of the classification of the joint systems arranged on both sides between metallic wall elements, t ≥ 100 mm:

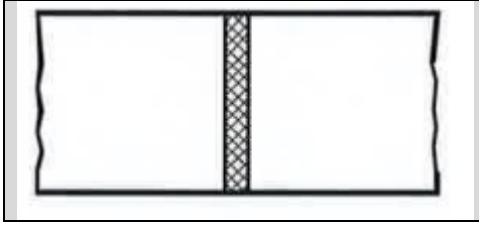
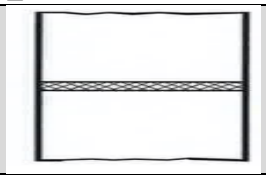
	Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
	4 ≤ b ≤ 14	≥ 2 x 30	EI 30-V-X-F-W4 to 14 EI30-H-X-F-W4 to 14

Table 2.5 provides an overview of the classification of the joint systems arranged on both sides in an aerated concrete wall, t ≥ 124 mm:

	Joint width b [mm]	ISO-FLAME KOMBI F120 Insertion depth [mm]	Recommended classification
	4 ≤ b ≤ 40	≥ 2 x 30	EI 30-H-X-F-W4 to 40 E30-H-X-F-W4 to 40

Annex B

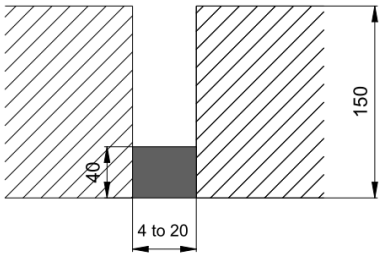
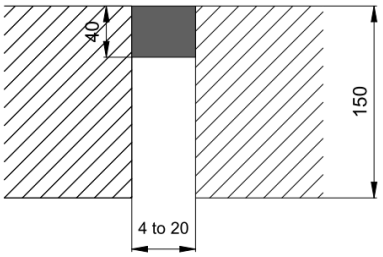
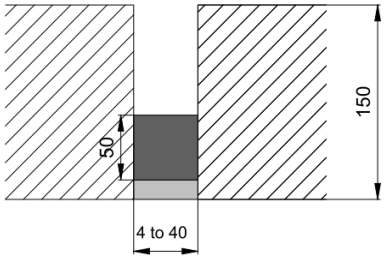
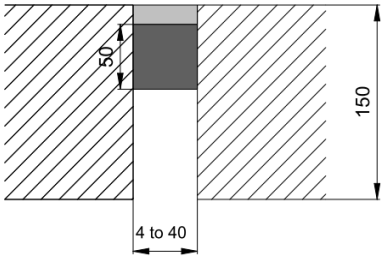
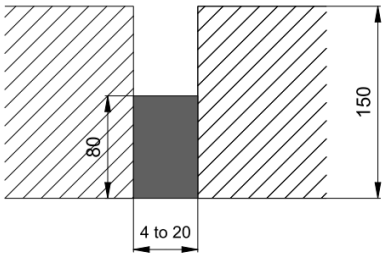
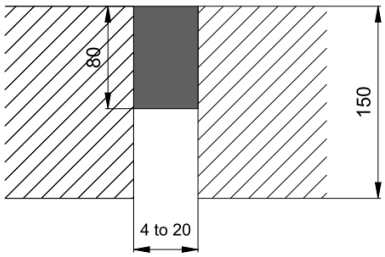
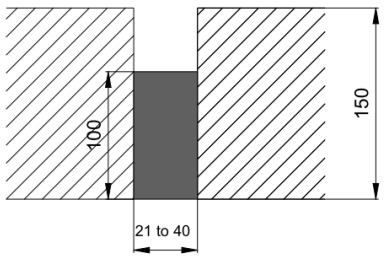
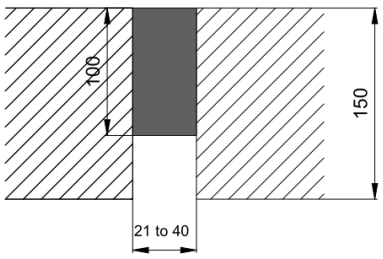
Durability for reactive materials

EOTA TR 024, attachment A1.3 test 2

Temperatur	**Probendicke** in mm	**Schaumfaktor in x-fach** 10 min	Bewertung
300 °C	0,38; 0,41; 0,40	5,0; 4,8; 4,7 **MW = 4,8**	stabiler Schaum
350 °C	0,34; 0,38; 0,35	14,4; 11,0; 10,7 **MW = 12,0**	stabiler Schaum
400 °C	0,38; 0,38; 0,42; 0,37; 0,33; 0,37	8,5; 8,3; 7,3; 8,1; 9,0; 7,5 **MW = 8,1**	keine Klebung mehr zwischen Probe und Alufolie
450 °C	0,42; 0,38; 0,41	6,1; 6,4; 6,0 **MW = 6,2**	kein stabiler Schaum
500 °C	0,42; 0,38; 0,40	-	nicht reproduzierbar messbar
550 °C	0,42; 0,37; 0,43	-	nicht reproduzierbar messbar

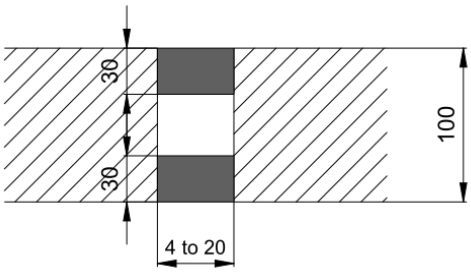
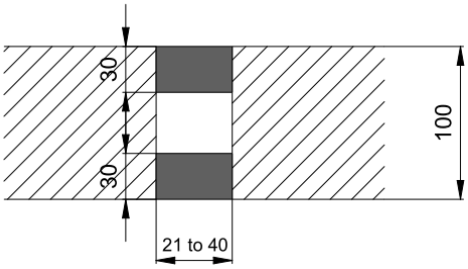
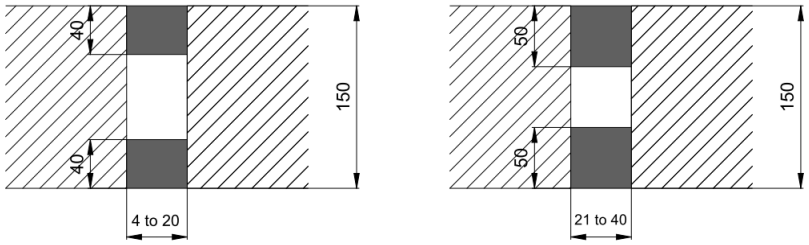
Annex C

Field of installation, floor joints between massive mineral construction elements

 	Installation in floor joints EI 45
 	Installation in floor joints EI 30 tape covered with a sealant (ISO-TOP FAÇADE SEAL)
 	Installation in floor joints EI 120
 	Installation in floor joints EI 120

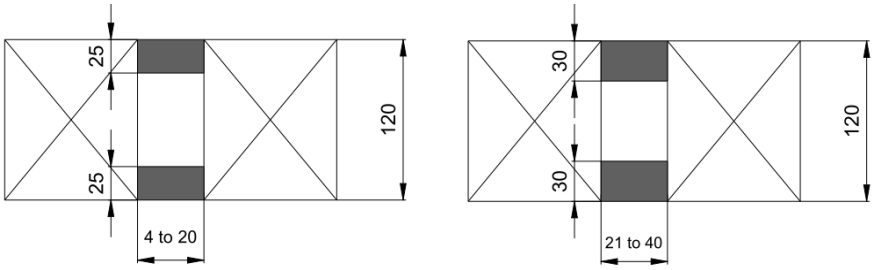
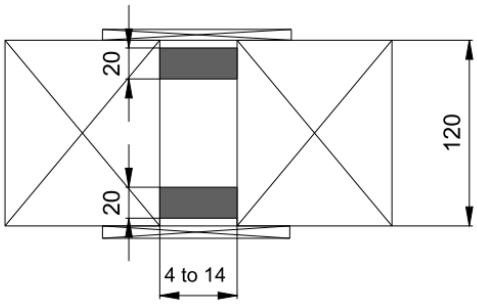
Annex D

Field of installation, wall joints between massive mineral construction elements

	Installation in wall joints EI 60
	Installation in wall joints EI 45
	Installation in wall joints EI 120

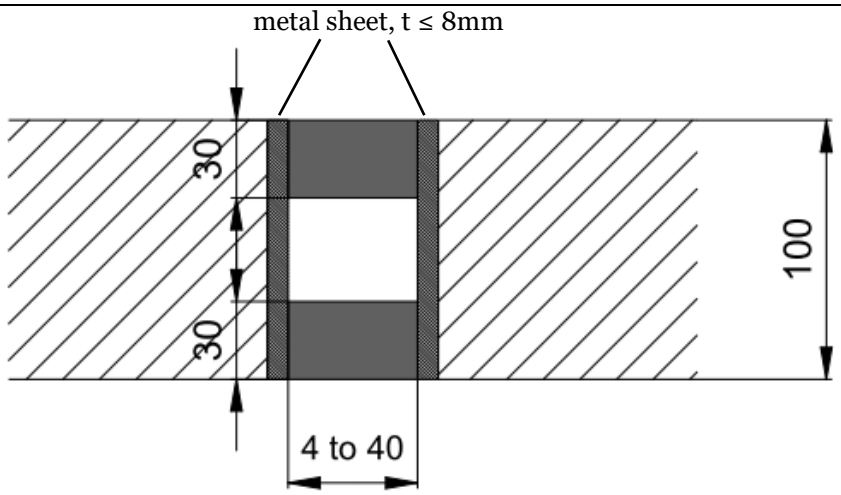
Annex E

Field of installation, wall joints between wooden construction elements

	Installation in wall joints EI 30
	Installation in wall joints EI 30 Joints covered with wooden list

Annex F

Field of installation, wall joints between metallic construction elements



Installation in wall joints

EI 30

Annex G

Installation sequence