



European Technical Assessment	ETA 20/1351 of 18/05/2021
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I General Part

Technical Assessment Body issuing the ETA:	TECNALIA RESEARCH & INNOVATION
Trade name of the construction product	KF-SEISMIC JOINT
Product family to which the construction product belongs	Fire Stopping and Sealing Product: Linear Joints
Manufacturer	KNAUF di Knauf S.r.l S.a.s Via Livornese 20 IT-56040 Castellina Marittima (PI) ITALY www.knauf.it
Manufacturing plant	PLANT A
This European Technical Assessment contains	10 pages including 1 annex which forms an integral part of this assessment
This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of	EAD 350141-00-1106 “Fire stopping and fire sealing products. Linear joints and gap seals.”

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Specific Parts

1. Technical description of the product

KF-SEISMIC JOINT is a linear joint seal system designed to maintain the fire separating function of a joint within one or between two or more juxtaposed fire resisting elements and to accommodate a specific degree of movement within the linear joint.

KF-SEISMIC JOINT consist of two rockwool mats treated with an ablative coating. The faces are covered with an aluminium sheet and with a metal mesh.

When exposed to a temperature exceeding 180 °C, KF-SEISMIC JOINT elements release water vapor by lowering the temperature. This action increases the thermal insulation of the product and creates a barrier to flames and heat.

On the side not exposed to fire, a grid or perforated mesh of at least 1 mm thickness is installed, attached to the wall or floor with steel plugs (60 x 8) mm that allow the sliding of the latter in case of movement of the support or building.

Components:

- a) Galvanized steel hexagonal wire mesh of 1 mm thick.
- b) Aluminium sheet coating.
- c) Mat of rockwool with nominal density of 100 kg/m³. The classification of reaction to fire according to EN 13501-1 is A1.
- d) Fiberglass mesh of 200 g/m².
- e) Ablative coating KF-SEAL T2.
- f) Fiberglass mesh of 200 g/m².
- g) Mat of rockwool with nominal density of 100 kg/m³. The classification of reaction to fire according to EN 13501-1 is A1.
- h) Aluminium sheet coating.
- i) Galvanized steel hexagonal wire mesh, 1 mm thick.



KF-SEISMIC JOINT is fixed to the constructive solutions of buildings (floors and walls) with the following fixings:

- Steel plates (300 x 30 x 1) mm with 3 holes of 10 mm diameter.
- Expansion steel plugs (60 x 8) mm.

The fixing system is independent of the width of the joint.

Four steel plates are placed on each meter of the KF-SEISMIC JOINT, two on each side of the joint. The distance between plates is 200 mm and three expansion studs are placed on each plate. The overlap between the KF-SEISMIC JOINT and the supporting construction must be at least 50 mm.

The product is marketed in the following nominal dimensions:

- (3000 x 1000 x 60) mm
- (3000 x 500 x 60) mm
- (3000 x 250 x 60) mm

The maximum movement permitted: $\pm 50\%$ of nominal width, from 100 mm until 600 mm.
The product weight is 7,5 kg/m².

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

2.1. Intended use

KF-SEISMIC JOINT is a specific element designed as a seal for expansion joints where there may be movement as established in EN 1366-4. It is particularly recommended when large movements of the support are expected, in case of very tall buildings or for applications in areas with seismic risk.

It is a system designed to prevent the spread of fire through horizontal and vertical joints (for floors and walls) resistant to fire that occur in buildings in the following situations:

- a) acceptable dimensional tolerances between two or more elements of the buildings;
- b) by design to accommodate the different movements induced by thermal differences, earthquakes and movements induced by wind loads;
- c) as a result of inadequate design, inaccurate assembly, repairs or damage to the building.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. Limits of applicability are stated in Annex A.

2.2. Use category

Type Y₁: KF-SEISMIC JOINT is intended for use at temperatures below 0°C with casual exposure to UV but no exposure to rain. Since the requirements for Type Y₁ are met, also are met requirements for Type Y₂, Z₁ and Z₂, so KF-SEISMIC JOINT is intended for use in internal conditions with humidity lower, equal to or higher than 85% RH.

2.3. Working life

The provisions made in this European Technical Assessment are based on an assumed working life of 10 years as minimum, provided that KF-SEISMIC JOINT are subject to appropriate use and maintenance.

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

Basic requirement for construction work	Essential characteristics	Performance
BWR 2 Safety in case of fire	Reaction to fire	Clause 3.1.1.
	Resistance to fire	Clause 3.1.2.
BWR 3 Hygiene, health and environment	Release of dangerous substances	Clause 3.2.1.
	Air permeability	Clause 3.2.2.
	Water permeability	Clause 3.2.3.
BWR 4 Safety in use	Mechanical resistance and stability	Clause 3.3.1.
	Resistance to impact/movement	Clause 3.3.2.
	Adhesion	Clause 3.3.3.
	Durability	Y1. Clause 3.3.4
	Movement Capability	Clause 3.3.5
	Cycling of perimeter seals of curtain walls	Clause 3.3.6
	Compression set	Clause 3.3.7
	Linear expansion on setting	Clause 3.3.8
BWR 5 Protection against noise	Airborne sound insulation	Clause 3.4.1.
BWR 6 Energy economy and heat retention	Thermal insulation	Clause 3.5.1.
	Water vapour permeability	Clause 3.5.2.

3.1. Safety in case of fire (BWR 2)

3.1.1. Reaction to fire

No performance assessed.

3.1.2. Resistance to fire

The resistance to fire performance according to EN 13501-2 of lineal joint seals is given in Annex A of this document. The tests were carried out according to EN 1366-4.

3.2. Hygiene, health and environment (BWR 3)

3.2.1. Release of dangerous substances

No performance assessed.

3.2.2. Air permeability

No performance assessed.

3.2.3. Water permeability

No performance assessed.

3.3. Safety and accessibility in use (BWR 4)

3.3.1. Mechanical resistance and stability

Not relevant because the use of mechanical fixings.

3.3.2. Resistance to impact/movement

Not relevant because the use of mechanical fixings.

Precautions are taken to prevent a person stepping onto a horizontal linear joint seal as the galvanized steel hexagonal wire mesh.

3.3.3. Adhesion

Not relevant because the use of mechanical fixings.

3.3.4. Durability

KF-SEISMIC JOINT fulfills the requirements of use category Y₁ in accordance with EAD 350141-00-1106, Section 2.2.12. The tests were carried out in accordance with EOTA TR 024 and clause 4.2.2 for Type Y₁.

3.3.5. Movement capability

KF-SEISMIC JOINT movement capability has been assessed according to annex B.13.4 of EAD 350141-00-1106. The maximum nominal width (1000 mm) has been tested. After cycling test, no failure occurs.

3.3.6. Cycling of perimeter seals for curtain walls

No performance is assessed.

3.3.7. Compression set

Not relevant.

3.3.8. Linear expansion on setting

Not relevant.

3.4. Protection against noise (BWR 5)

3.4.1. Airborne sound insulation

No performance is assessed.

3.5. Energy economy and heat retention (BWR 6)

3.5.1. Thermal resistance

No performance is assessed.

3.5.2. Water vapour permeability

No performance is assessed.

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

According to the decision 1999/454/EC - Commission decision of 22 June 1999 (OJ L 178/52 of 14/07/99, p. 3), as amended by Decision of the Commission 2001/596/EC of 8 January 2001 (OJ L 209/33 of 2/8/2001, p.2) the system of assessment and verification of constancy of performance (see Annex V to the regulation (EU) No 305/2011 and EC Delegated Act No 568/2014 of 18 February 2014) given in the following table apply:

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
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

All the necessary technical details for the implementation of the AVCP system are laid down in the Control Plan deposited at Tecnalía Research and Innovation, with which the Factory Production Control shall be in accordance.

The Control Plan is a confidential part of the ETA and is only handed over to the notified body involved in the assessment and verification of constancy of performance.

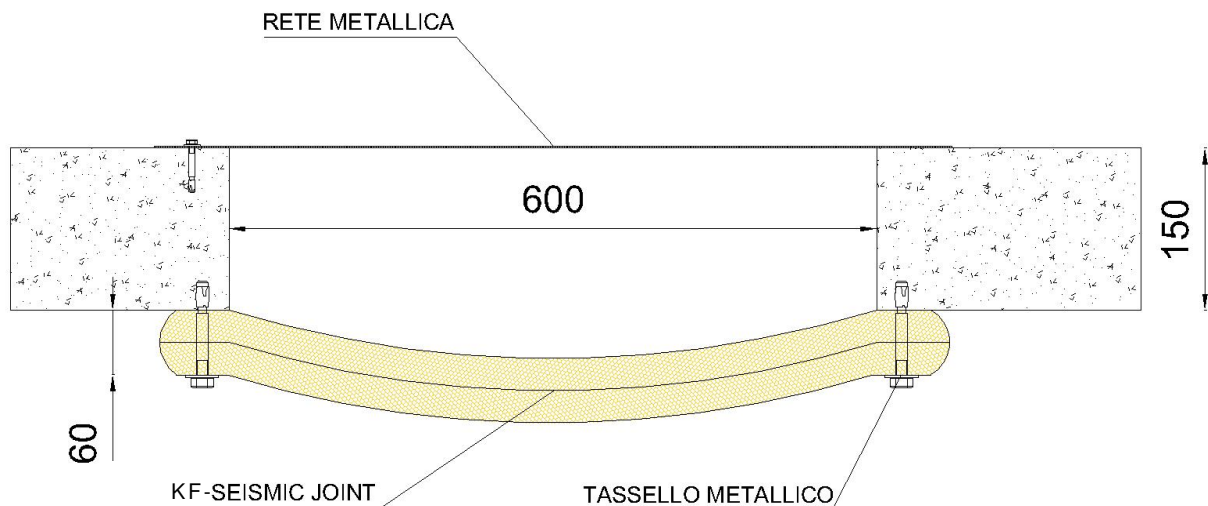
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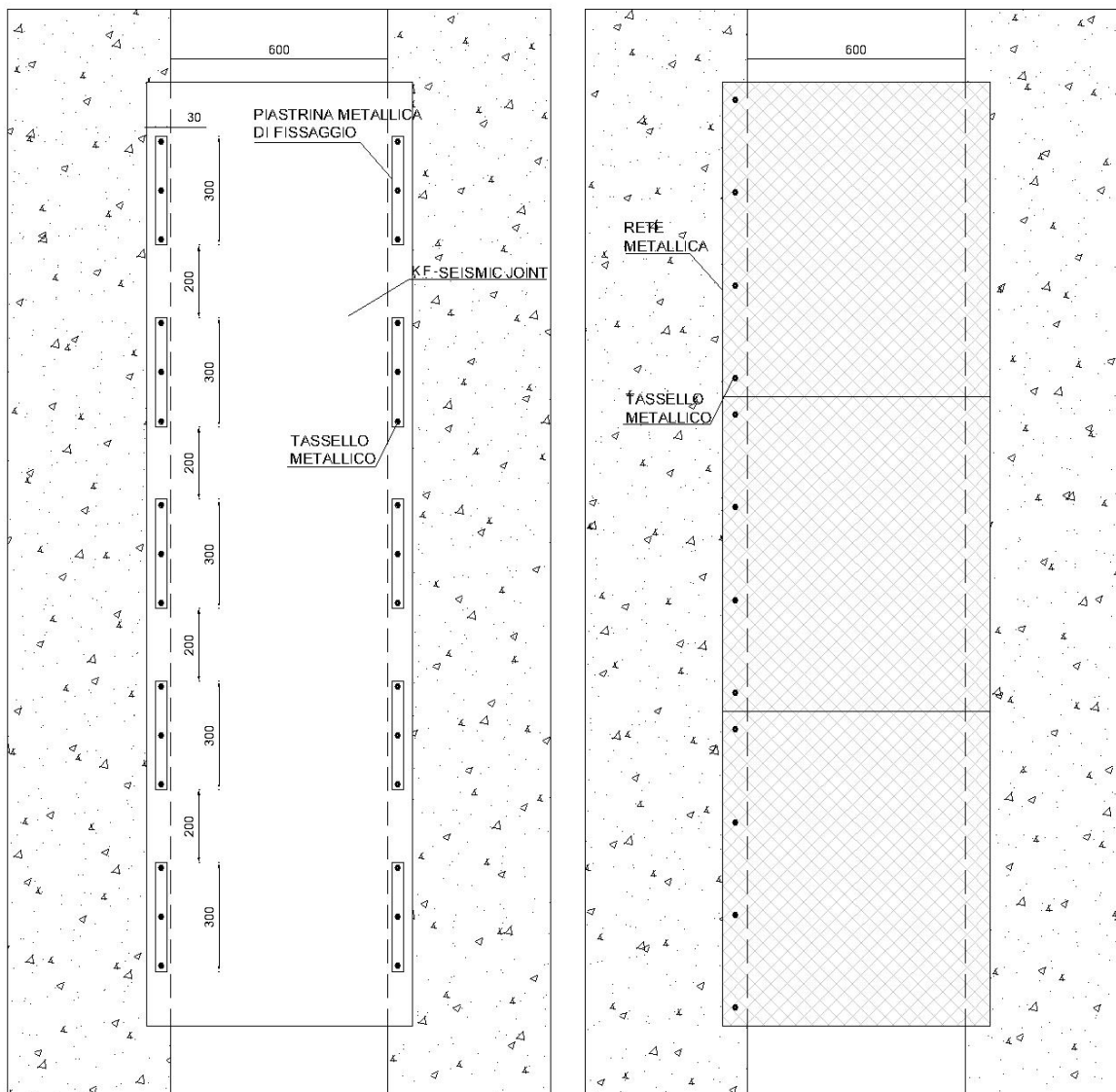
Annex A: Resistance to fire classification of KF-SEISMIC JOINT

A.1 Horizontal supporting constructions with thickness of minimum 150 mm



Seal depth	Seal width	Joint width	Fire Resistance Classification
60 mm	1000 mm	600 mm	EI120-H-M050-B
60 mm	1000 mm	600 mm	E180-H-M050-B
60 mm	250 mm	100 mm	EI120-H-M050-B
Field of application	Limits of applicability according to EN 1366-4:		
Orientation	Results obtained with orientation of the linear joints are valid for A, D and E orientations of the linear joints.		
Supporting construction	Results obtained with lightweight concrete elements of expanded clay supporting constructions apply to same separating elements of a 150 mm thickness or greater, and 1600 kg/m ³ density or greater.		
Seal position	Results obtained with seal position are valid for all configurations specified in Annex E.		
Mechanically induced movement	Results obtained with mechanically induced movement during the tests are only valid for the lateral movement capability tested (50%) or lower.		

A.2 Rigid wall constructions with thickness of minimum 150 mm



Seal depth	Seal width	Joint width	Fire Resistance Classification
60 mm	1000 mm	600 mm	EI120-V-M050-B
60 mm	250 mm	100 mm	EI120-V-M050-B
Field of application	Limits of applicability according to EN 1366-4:		
Orientation	Results obtained with orientation of the linear joints are only valid for B orientation of the linear joint.		
Supporting construction	Results obtained with autoclaved aerated concrete standard supporting constructions apply to concrete, block work and masonry separating elements of a 150 mm thickness or greater, and 500 kg/m ³ density equal to or greater.		
Seal position	Results obtained with seal position are valid for all configurations specified in Annex E.		
Mechanically induced movement	Results obtained with mechanically induced movement during the tests are only valid for the lateral movement capability tested (50%) or lower.		