Deutsches Institut für Bautechnik

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Approval body for construction products and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

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European Technical Assessment ETA-21/0974 of 13 October 2022

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment	Deutsches Institut für Bautechnik
Trade name of the construction product	"MD+"
Product family to which the construction product belongs	Intumescent products for fire sealing and fire stopping purposes
Manufacturer	FILOform GmbH Kupferschmidstraße 86 79761 Waldshut-Tiengen DEUTSCHLAND
Manufacturing plant	001VLFFNL
This European Technical Assessment contains	6 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 350005-00-1104, Edition May 2015

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Specific Part

1 Technical description of the product

Object of this European technical assessment (ETA) is the intumescent construction product, the sealant "MD+".

In case of fire, exposed to high temperatures, the intumescent product expands and generates foam. This foam seals joints and gaps, closes voids and openings and restricts this way the passage and propagation of heat, smoke, flames or any combination of them.

The construction product "MD+" is a solvent-free, viscous mastic or sealant of red-brown colour, delivered in cartridges. The product essentially consists of intumescent substances and a binder. When applied "MD+" generates flexible layers, effective in case of fire.

The technical characteristics used for the fire sealing and fire stopping effect of the construction product, the sealant "MD+" are given in Annex 1.

2 Specification of the intended use in accordance with the applicable European assessment Document (EAD)

The construction product "MD+" is assessed on the basis of EAD N° 350005-00-1104, edition May 2015[1] as an intumescent product for fire sealing and fire stopping purposes without specific final use (IU 1).

The construction product, the sealant "MD+", is intended to be used as essential component in, between or on construction products, construction elements, kits and special constructions which have to meet requirements concerning the safety in case of fire e.g. in cable and pipe sealing systems.

In case of fire, the product delays the heat transfer through fire resistant construction elements, assemblies or special constructions by expanding under the impact of high temperatures and restricts the spread of fire.

The performance "resistance to fire" shall be tested for the specific final use, if requested.

The performance given in Section 3 is only valid when the intumescent construction product "MD+" is used considering the remarks and the boundary conditions of clause 3.3.

The tests and assessment methods on which this European Technical Assessment is based lead to an assumption of working life of the intumescent sealant "MD+" in final use of at least 10 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.

[1] Official Journal of the EU N° C 378/02 of 13 November 2015

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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Essential characteristic	Performance
Reaction to fire	in accordance with EN 13501-1[2]; class E

3.1.2 Resistance to fire

The performance "Resistance to fire" shall be demonstrated separately for the intended final use if requested.

3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content of dangerous substances	No dangerous substances[3]

The detailed chemical composition of the intumescent construction product, the sealant "MD+" was assessed by DIBt and is deposited with DIBt in written form.

3.3 General aspects

The evidence of durability is part of testing the basic works requirements and the achievement of the performance assessed. The durability is only presumed, if the provisions for the intended use are considered.

The assessment of the durability regarding to the product's fire safety performance was done for climatic use conditions of type Z_1 – product intended for use under frost protected in-door conditions with relative air humidity higher than 85 % RH and temporary condensation in accordance with EAD Nr. 350005-00-1104, clause 1.2.2. This assessment is also valid for climatic conditions of type Z_2 – intended for dry, frost protected indoor use at relative humidity below of 85 % RH and at temperatures between +5 °C ± 5 °C and +35 °C ± 5 °C.

Conclusion:

The intumescent construction product, the sealant "MD+" may be used permanently in frost-protected areas at temperatures between 0 °C and +40 °C also with changing or higher relative humidity - above 85 % RH - and temporary condensation without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance.

[2] EN 13501-1:2019 Fire classification of construction products and building elements, Part 1 Classification using test data from reaction to fire tests of the products

[3] In accordance with the Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 (published in the Official Journal of the EU N° L 353 of 31/12/2008, p 1)

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

In accordance with the European Assessment Document EAD No 350005-00-1104 the Decision of the commission N° 1999/454/EC of 22 June 1999 (OJ of the EU L 178 of 14 July 1999, p 42), amended by EC Decision 2001/596/EC of 8 January 2001 (OJ of the EU L 209 of 2 August 2001, p 33) is the legal basis for the determination of the AVCP system. So system 1 applies for the assessment and verification of constancy of performance (AVCP) (see Annex V in conjunction with Article 65 (2) of the Regulation (EU) N° 305/2011) according to the following table:

Product	Intended use	Characteristic	System
sealant "MD+"	Components effective in the view of safety in case of fire used in construction products, construction elements, kits and special constructions	- Reaction to fire - properties relevant for the fire sealing and fire stopping effect	**1**

5 Technical details necessary for the implementation of System 1 for the Assessment and verification of constancy of performance (AVCP), as provided for in the applicable European Assessment Document

The technical details necessary for the implementation of the system of assessment and verification of constancy of Performance (AVCP) are laid down in the control plan (confidential part of this ETA) deposited at Deutsches Institut für Bautechnik.

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ANNEX 1

CHARACTERISTICS RELEVANT FOR THE FIRE SEALING AND FIRE STOPPING EFFECTS OF THE CONSTRUCTION PRODUCT

Sealant "MD+"

Characteristics	Range and tolerances	Test method
Density (as delivered)	1200 kg/m^3 ± 100 kg/m^3	see control plan
Content of non-volatile components (fresh)	≥ 95,0 %	
Loss of mass at a certain temperature (fresh)	8,5 % ± 2,5 % (at 300 °C for 30 minutes)	
Expansion ratio	3,5 to 5,0 (at 400 °C with a top-load for 30 minutes at samples ca 2,7 mm thick)	
Expansion pressure	1,20 N/mm^2 to 1,60 N/mm^2 (at 300 °C with samples ca 2,8 mm thick)	

The chemical reaction starts at approximately at 250 °C.