

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-20/0332
of 3 June 2020

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

"Tangit FP 440"

Product family
to which the construction product belongs

Intumescent products for fire sealing and fire stopping
purposes

Manufacturer

Henkel AG & Co. KGaA
Henkelstraße 67
40589 Düsseldorf
DEUTSCHLAND

Manufacturing plant

2043¹

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

¹ Address known at DIBt

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Specific Part

1 Technical description of the product

Object of this European technical assessment (ETA) is the intumescent construction product "Tangit FP 440".

In case of fire exposed to high temperatures the intumescent product expands and generates foam. This generated 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 product does not generate essential expansion pressure during this foaming.

The technical characteristics used for fire sealing and fire stopping effect of the construction product "Tangit FP 440" are given in Annex 1.

The construction product "Tangit FP 440" is a soft mastic of white or grey colour and will be delivered in cartridges or canisters. The product essentially consists of intumescent substances and a binder. When applied it generates flexible layers which expand in case of fire.

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

The construction product "Tangit FP 440" is assessed on the basis of EAD 350005-00-1104, edition May 2015² as an intumescent product for fire sealing and fire stopping purposes without specific final use (IU 1).

The construction product "Tangit FP 440" is intended to be used as essential component in, between or on construction products, assemblies, construction elements, kits and special constructions which meet requirements concerning the safety in case of fire. In case of fire, the product delays the heat transfer through fire resistant construction products and construction elements by expanding under the impact of high temperatures and thus restricting the spread of fire in fire resistant products and assemblies.

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

The performance given in Section 3 is only valid if the intumescent construction product "Tangit FP 440" is used considering the remarks and the boundary conditions of clause 3.4.

The tests and assessment methods on which this European Technical Assessment is based lead to an assumption of working life of the intumescent construction product "Tangit FP 440" in final use of at least 10 years³.

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.

² Official Journal of the EU N° 378/02 of 13 November 2015
³ results of long-term aging (natural-aging) available

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

3.1 Safety in case of fire (BWR 2)

3.1.1 Reaction to fire

Essential characteristic	Performance
Reaction to fire	Class E according to EN 13501-1 ⁴

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 ⁵

The detailed chemical composition of the intumescent construction product "Tangit FP 440" was assessed at DIBt and is deposited with DIBt.

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 performance was done for climatic use conditions of type Z₂ and Z₁ (in-door use, see EAD Nr. 350005-00-1104, clause 1.2.2).

Conclusion:

The intumescent construction product "Tangit FP 440" may be used in dry, frost-protected rooms with occasional condensation without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance.

The product was additionally tested under specific conditions without any essential change for

- Exposure to a constant temperature of 80 °C for 40 days,
- Exposure to intimate contact to plastics (PVC, PE).

The essential characteristics and the resulting performance did not change due to these exposures.

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:

⁴ EN 13501-1:2019-05 Fire classification of construction products and building elements, Part 1 and A1:2009 Classification using test data from reaction to fire tests

⁵ 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)

Product	Intended use	Characteristic	System
"Tangit FP 440"	Components effective in the view of safety in case of fire (BWR) used in construction products, elements, kits and assemblies	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.

Issued in Berlin on 3 June 2020 by Deutsches Institut für Bautechnik

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beglaubigt:
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ANNEX 1

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

"Tangit FP 440"

Characteristics	Range and tolerance	Test method ⁶
Density	1200 kg/m ³ to 1260 kg/m ³	ISO 2811
Content of non-volatile components	51,0 % to 61,0 %	see control-plan
Loss of mass at a certain temperature	47,0 % to 57,0 %	see control-plan
Expansion ratio	36,0 to 50,0	see control-plan

The chemical reaction of foaming starts at ca. 180°C.

⁶ Details of the test method are deposited with DIBt