

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-13/0496  
of 7 May 2018

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

"System G+H PYROMENT KVB 2000®"

Product family  
to which the construction product belongs

Intumescent products for fire sealing and fire stopping  
purposes

Manufacturer

G+H Isolierung GmbH  
Industriestraße 19a  
67063 Ludwigshafen  
DEUTSCHLAND

Manufacturing plant

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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, May 2015

This version replaces

ETA-13/0496 issued on 23 May 2013

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## Specific Part

### 1 Technical description of the product

Object of this European Technical Assessment (ETA) is the intumescent construction product "System G+H PYROMENT KVB 2000<sup>®</sup>".

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. Thus, the foam restricts the passage and the spread of heat, smoke, flames or any combination of these. The product does not generate significant expansion pressure during reaction.

The construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" is a tight, factory made, flexible intumescent fabric. It consists essentially of a glass filament fabric<sup>1</sup> of a mass per unit area of 200 g/m<sup>2</sup>, which is mechanically covered with an intumescent coating<sup>2</sup> applied on both sides – a layer of anthracite colour grade on the intended inner face and a layer of white colour on the intended outer face.

The flexible intumescent fabric "System G+H PYROMENT KVB 2000<sup>®</sup>" is produced in endless rolls and can be cut to any size and dimension at the factory.

On site the product may be cut with appropriate tools.

The technical characteristics relevant for the fire sealing and fire stopping effects of the construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" are given in Annex 1.

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

The construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" is assessed on the basis of EAD 350005-00-1104<sup>3</sup> as an intumescent product for fire sealing and fire stopping purposes without defined final intended use (IU 1).

The construction product is intended to be used as an essential component in construction products, construction elements, assemblies, kits and special constructions which need to 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.

The performance given in section 3 is only valid, if the construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" in use considers the instructions and the conditions stated in section 3.3.

The test and assessment methods on which this European Technical Assessment is based, lead to the assumption of working life of the intumescent construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" of at least 10 years in final use.

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.

<sup>1</sup> Type, manufacturer and characteristics deposited at DIBt.  
<sup>2</sup> Required quantity and chemical composition deposited at DIBt.  
<sup>3</sup> Official Journal of the EU N° C 378/02 of 13/11/2015

English translation prepared by DIBt

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

#### 3.1 Safety in case of fire (BWR 2)

##### 3.1.1 Reaction to fire

product	Performance
"System G+H PYROMENT KVB 2000®"	class B-s3,d0 in accordance with EN 13501-1 <sup>4</sup> .

##### 3.1.2 Resistance to fire

The performance "resistance to fire" shall be determined separately for every final use and shall be classified, if required for the construction element concerned.

#### 3.2 Hygiene, health and the environment (BWR 3)

Essential characteristic	Performance
Content of dangerous substances	No dangerous substances <sup>5</sup>

The detailed chemical composition of the intumescent construction product "System G+H PYROMENT KVB 2000®" is deposited with DIBt in written form.

#### 3.3 General aspects

Durability testing shall be an integral part of assessing the basic works and performance requirements. The following specific provisions for use shall be complied with to ensure the durability of the performance.

The tests and the assessment of the relevant product performance were carried out for environmental conditions of type Z<sub>1</sub> – product intended for use at internal conditions with high humidity (incl temporary condensation) excluding temperatures below 0 °C. – in accordance with EOTA Technical Report 024 (EOTA TR 024)<sup>6</sup>, section 4.2.6

Result:

The intumescent construction product "System G+H PYROMENT KVB 2000®" and cuts of it can be used durably under use conditions of type Z<sub>1</sub> (indoor use at high relative humidity) without having to fear essential changes in the relevant fire sealing and fire stopping properties and the resulting performance. This assessment includes the unrestricted in-door use under use conditions of type Z<sub>2</sub>.

Additionally the product "System G+H PYROMENT KVB 2000®" was tested under specific durability conditions according to EOTA TR 024, section 4.3

- Exposure to a constant temperature of 80 °C for 40 days,
- Exposure to solvents (tested with Butylacetat, Butanol, solvent naphtha and fuel)
- Exposure to intimate contact to plastics (PVC, PE).

The characteristics "expansion ratio" and "expansion pressure" did not change essentially due to these exposures.

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

<sup>5</sup> 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)

<sup>6</sup> EOTA TR 024 Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and products; edition as amended July 2009

If the construction product "System G+H PYROMENT KVB 2000<sup>®</sup>" is intended to be exposed to specific conditions, further tests are necessary.

**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, May 2015 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) and the following table:

Product	Intended use	characteristic	System
"System G+H PYROMENT KVB 2000 <sup>®</sup> "	Components effective in view of safety in case of fire used in construction products, construction elements, kits and special assemblies	reaction to fire, properties relevant for the fire sealing and fire stopping effect	1

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

The technical details necessary for the implementation of the system 1 for assessment and verification of constancy of performance are laid down in the control plan (confidential part of this ETA) deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 7 May 2018 by Deutsches Institut für Bautechnik

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*beglaubigt:*  
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## ANNEX 1

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

#### "System G+H PYROMENT KVB 2000<sup>®</sup>"

Characteristic	Test method <sup>6</sup>	Range of determined values/tolerances*
thickness of the coated fabric	EOTA TR 024, cl. 3.1.2	1,0 mm ± 0,2 mm
Mass per unit area	TR 024, Abs. 3.1.5	1200 g/m <sup>2</sup> ± 10 %
Expansion ratio	TR 024, Abs. 3.1.11 (tested at 400°C for 30 minutes without a top-load on specimen 0,7 mm thick)	58,0 to 94,0
Loss of mass at a certain temperature	TR 024, Abs. 3.1.8 (tested at 400 °C for 30 minutes)	53,0 % ± 5 %