



European Technical Approval ETA-13/0217

English translation prepared by DIBt - Original version in German language

Handelsbezeichnung
Trade name

Fugenschnur "SG 300"
joint filling rope "SG 300"

Zulassungsinhaber
Holder of approval

Rex Industrie-Produkte
Graf von Rex GmbH
Großaltdorfer Straße 59
74541 Vellberg
DEUTSCHLAND

Zulassungsgegenstand
und Verwendungszweck
*Generic type and use
of construction product*

Linienförmige Fugenabdichtungen und Brandsperren

Linear Joint and Gap Seals

Geltungsdauer:
Validity:

vom
from
bis
to

18 March 2013

18 March 2018

Herstellwerk
Manufacturing plant

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Diese Zulassung umfasst
This Approval contains

13 Seiten einschließlich 5 Anhänge
13 pages including 5 annexes

I LEGAL BASES AND GENERAL CONDITIONS

- 1 This European technical approval is issued by Deutsches Institut für Bautechnik in accordance with:
 - Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products¹, modified by Council Directive 93/68/EEC² and Regulation (EC) N° 1882/2003 of the European Parliament and of the Council³;
 - Gesetz über das In-Verkehr-Bringen von und den freien Warenverkehr mit Bauprodukten zur Umsetzung der Richtlinie 89/106/EWG des Rates vom 21. Dezember 1988 zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten über Bauprodukte und anderer Rechtsakte der Europäischen Gemeinschaften (Bauproduktengesetz - BauPG) vom 28. April 1998⁴, as amended by Article 2 of the law of 8 November 2011⁵;
 - Common Procedural Rules for Requesting, Preparing and the Granting of European technical approvals set out in the Annex to Commission Decision 94/23/EC⁶;
 - Guideline for European technical approval of "Fire Stopping and Fire Sealing Products - Part 3: Linear Joint and Gap Seals", ETAG 026-03.
- 2 Deutsches Institut für Bautechnik is authorized to check whether the provisions of this European technical approval are met. Checking may take place in the manufacturing plant. Nevertheless, the responsibility for the conformity of the products to the European technical approval and for their fitness for the intended use remains with the holder of the European technical approval.
- 3 This European technical approval is not to be transferred to manufacturers or agents of manufacturers other than those indicated on page 1, or manufacturing plants other than those indicated on page 1 of this European technical approval.
- 4 This European technical approval may be withdrawn by Deutsches Institut für Bautechnik, in particular pursuant to information by the Commission according to Article 5(1) of Council Directive 89/106/EEC.
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- 6 The European technical approval is issued by the approval body in its official language. This version corresponds fully to the version circulated within EOTA. Translations into other languages have to be designated as such.

¹ Official Journal of the European Communities L 40, 11 February 1989, p. 12
² Official Journal of the European Communities L 220, 30 August 1993, p. 1
³ Official Journal of the European Union L 284, 31 October 2003, p. 25
⁴ *Bundesgesetzblatt Teil I* 1998, p. 812
⁵ *Bundesgesetzblatt Teil I* 2011, p. 2178
⁶ Official Journal of the European Communities L 17, 20 January 1994, p. 34

II SPECIFIC CONDITIONS OF THE EUROPEAN TECHNICAL APPROVAL

1 Definition of the product and intended use

1.1 Definition of the construction product

This European technical approval applies for the joint filling rope with the designation "SG 300". "SG 300" is a flexible and elastic joint filling rope made of mineral fibres with a braid of textile glass yarn⁷.

The joint filling rope is made of dimensionally stable mineral wool according to EN 13162 produced from molten stone classified class A1 according to EN 13501-1.

For dimensions (nominal diameter depending on the joint width to be closed) and nominal bulk density of "SG 300", see Annex 1 Table 1.0.

1.2 Intended Use

1.2.1 General

The joint filling rope "SG 300" is used for sealing horizontal and vertical linear joints (structural joints as stepped joints and linear butt joints)

- in or between fire-resistant separating wall constructions
- in or between fire-resistant separating floor constructions
- between fire-resistant separating wall and floor constructions.

The joint filling rope is intended to maintain or reinstate the fire resistance performance of separating building elements where they are interrupted or separated by joints.

The maximum lateral stretching capability of the joint filling rope is 7.4 %.

The maximum shear stress of horizontal joints is restricted to $\Delta h = 100$ mm compared to the installed condition.

The joint filling rope is not intended for load transmission.

The joint filling rope may be used for sealing linear joints in or between the following separating building elements:

- rigid walls
 - aerated concrete with a minimum density of 700 kg/m^3
 - concrete, reinforced concrete or masonry with a minimum density $2400 \text{ kg/m}^3 \pm 20 \%$
- rigid floors
 - aerated concrete with a minimum density of 700 kg/m^3
 - concrete or reinforced concrete with a minimum density $2400 \text{ kg/m}^3 \pm 20 \%$

The minimum thickness of the separating building elements shall be 150 mm.

The separating building elements shall be classified according to EN 13501-2 for the required fire resistance period.

For further details on fire resistant designs, see Annexes 1 and 2.

⁷ Details of the material specifications and the manufacturing process of "SG 300" are deposited with the Deutsches Institut für Bautechnik.

1.2.2 Use Category

The joint filling rope "SG 300" is intended for the following use categories according to ETAG 026-3:

- Type Y₁: intended for use at temperatures below 0 °C with exposure to UV but no exposure to rain.
- Type Y₂: Products for linear joint seals intended for use at temperatures below 0 °C, but with no exposure to rain nor UV.
- Type Z₁: intended for use in internal conditions with humidity equal to or higher than 85 % RH, excluding temperatures below 0 °C.
- Type Z₂: intended for use in internal conditions with humidity lower than 85 % RH, excluding temperatures below 0 °C.

1.2.3 Working life

The provisions made in this European technical approval are based on an assumed working life of the joint filling rope "SG 300" of 25 years, provided that the conditions laid down in sections 4.2 /5.1/ 5.2 for the packaging/transport/storage/installation/use/maintenance/repair are met. 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 Characteristics of the product and methods of verification

2.1 General

- 2.1.1 The assessment of fitness for use has been made in accordance with ETAG 026 Part 3. For the evaluation of the joint filling rope, the product properties "reaction to fire", "fire resistance", "emission of dangerous substances" and "durability and serviceability" were taken into consideration.
- 2.1.2 The product properties specified in sections 2.2 to 2.4 only apply to the joint filling rope and its components described in this ETA. Deutsches Institut für Bautechnik shall be immediately notified of any changes to the materials, composition, dimensions or properties of these components. Deutsches Institut für Bautechnik will decide if a new evaluation is required.

2.2 Safety in case of fire

2.2.1 Reaction to fire

The joint filling rope is classified class A1 according to EN 13501-1.

2.2.2 Fire resistance

The joint filling rope "SG 300" has been tested in accordance with ETAG 026-3 and EN 1366-4 in combination with building elements according to section 1.2.1. For the fire resistance classified according to EN 13501-2 depending on the number of layers and the arrangement of the joint filling rope and the type of the joints and building elements, see Annex 2.

2.3 Emission of dangerous substances

The product "SG 300" does not contain dangerous substances listed in EOTA TR 034 (edition February 2012).

The chemical composition of all components of the product has to be identical to the ones which are deposited with the Deutsches Institut für Bautechnik.

Note: In addition to the specific clauses relating to dangerous substances contained in this European technical approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and

administrative provisions). In order to meet the provisions of the Construction Products Directive, these requirements need also to be complied with, when and where they apply.

2.4 Durability and serviceability

The joint filling rope "SG 300" fulfils the requirements for the intended use categories Type Y₁, Y₂, Z₁ and Z₂ according to ETAG 026.

2.5 Additional components

For optional additional components, see section 4.2.3.

Additional components stated in this European technical approval are not regulated by this approval and can therefore not bear the CE marking.

3 Evaluation and attestation of conformity and CE marking

3.1 System of attestation of conformity

According to the decision 1999/454/EC of the European Commission⁸ and the amendment according to the Decision 2001/596/EC of the European Commission⁹, system 1 of the attestation of conformity applies.

In addition, according to the Decision 2001/596/EC of the European Commission⁹ system 3 of the attestation of conformity applies with regard to reaction to fire.

These systems of attestation of conformity are detailed as follows:

System 1: Certification of the conformity of the product by a notified certification body on the basis of:

- (a) Tasks for the manufacturer:
 - (1) factory production control;
 - (2) further testing of samples taken at the factory by the manufacturer in accordance with a prescribed test plan;
- (b) Tasks for the notified body:
 - (3) initial type-testing of the product;
 - (4) initial inspection of factory and of factory production control;
 - (5) continuous surveillance, assessment and approval of factory production control.

System 3: Declaration of conformity of the product by the manufacturer on the basis of:

- (a) Tasks for the manufacturer:
 - (1) factory production control;
- (b) Tasks for the notified body:
 - (2) initial type-testing of the product.

3.2 Responsibilities

3.2.1 Tasks for the manufacturer

3.2.1.1 Factory production control

The manufacturer shall exercise permanent internal control of production. All the elements, requirements and provisions adopted by the manufacturer shall be documented in a systematic manner in the form of written policies and procedures, including records of results performed.

⁸ Official Journal of the European Communities L 178/52 of 14/7/1999

⁹ Official Journal of the European Communities L 209/33 of 2/8/2001

This production control system shall insure that the product is in conformity with this European technical approval.

The manufacturer may only use raw and constituent materials stated in the technical documentation of this European technical approval.

The factory production control shall be in accordance with the control plan, which is part of the technical documentation of this European technical approval. The control plan is laid down in the context of the factory production control system operated by the manufacturer and deposited with Deutsches Institut für Bautechnik.¹⁰

The results of factory production control shall be recorded and evaluated in accordance with the provisions of the control plan. The records shall include at least the following information:

- name of the construction product or the constituent material and the components,
- type of control or test,
- date of production and testing of the construction product or the constituent material or components,
- result of controls and testings and, if appropriate, comparison with requirements,
- signature of person responsible for factory production control.

The records shall be archived for at least five years. They shall be submitted to the notified body responsible for continuous surveillance and Deutsches Institut für Bautechnik upon request.

If the test results are insufficient, the manufacturer shall take appropriate measures to rectify the shortcomings. Construction products which do not meet the requirements shall be treated such that they cannot be mistaken for products in compliance. After rectification of the shortcoming – where technically possible and required to verify rectification of the shortcoming – the test in question shall be repeated.

3.2.1.2 Other tasks for the manufacturer

The manufacturer shall, on the basis of a contract, involve a body which is notified for the tasks referred to in section 3.1 in the field of linear joint and gap seals in order to undertake the actions laid down in section 3.2.2. For this purpose, the control plan referred to in section 3.2.1.1 shall be handed over by the manufacturer to the notified body involved.

The manufacturer shall provide an installation instruction on every construction product according to this ETA containing at least the following information:

- type and properties (minimum thickness, density) and fire resistance of the building elements in which the joint filling rope may be installed
- description or graphic presentation of the proper installation (number of layers and arrangement of the joint filling rope depending on the type of the building elements, the intended fire resistance and the width of the joints)
- permitted surface finish

The manufacturer shall make a declaration of conformity, stating that the construction product is in conformity with the provisions of the European technical approval ETA-13/0217.

¹⁰ The control plan is a confidential part of the European technical approval and only handed over to the notified body involved in the procedure of attestation of conformity. See section 3.2.2.

3.2.2 Tasks for the notified bodies

The notified body shall perform the following tasks in accordance with the provisions laid down in the control plan:

- initial type-testing of the product,
- initial inspection of factory and of factory production control,
- continuous surveillance, assessment and approval of factory production control according to the control plan relating to the European technical approval ETA-13/0217

The notified body shall retain the essential points of its actions referred to above and state the results obtained and conclusions drawn in a written report.

The notified certification body involved by the manufacturer shall issue an EC certificate of conformity of the product stating the conformity with the provisions of this European technical approval.

In cases where the provisions of the European technical approval and its control plan are no longer fulfilled the certification body shall withdraw the certificate of conformity and inform Deutsches Institut für Bautechnik without delay.

3.3 CE marking

The CE marking shall be affixed on the product itself or the label attached to it or on the packaging or on the accompanying commercial document, e.g. the EC declaration of conformity. The letters "CE" shall be followed by the identification number of the notified certification body, where relevant, and be accompanied by the following additional information:

- the name and address of the manufacturer (legal entity responsible for the manufacturer),
- the last two digits of the year in which the CE marking was affixed,
- the number of the EC certificate of conformity for the product
- the number of the European technical approval,
- the number of the guideline for European technical approval
- designation of the product (trade name)
- nominal diameter.
- the use category (ies)
- see ETA-13/0217 for other relevant characteristics.

For an example of the CE marking, see Annex 5.

4 Assumptions under which the fitness of the product for the intended use was favourably assessed

4.1 Manufacturing

The European technical approval is issued for the product on the basis of agreed data/information, deposited with Deutsches Institut für Bautechnik, 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 Deutsches Institut für Bautechnik before the changes are introduced. Deutsches Institut für Bautechnik will decide whether or not such changes affect the approval and consequently the validity of the CE marking on the basis of the approval and if so whether further assessment or alterations to the approval shall be necessary.

4.2 Installation

4.2.1 General

The characteristics of the product specified in this European technical approval only apply if the joint filling rope is installed in accordance with the specifications in Annexes 1 and 2 and the manufacturer's instructions of installation.

4.2.2 Processing of the joint filling rope "SG 300"

The joint filling rope "SG 300" is to be cut with appropriate cutting tools. Appropriate measures shall be taken to protect the joint filling rope from damage. For further details follow the manufacturer's instructions.

4.2.3 Installation of the joint filling rope "SG 300" with additional construction products

For optional designs with additional construction products (e. g. fixing of the joint filling rope in the inside surface of the building element with adhesives, surface finish with permanently elastic sealing compounds, coatings or coverings) the manufacturer's instructions shall be followed.

Evaluation of resistance to fire of joint filling ropes that have been installed with additional construction products is not part of this European technical approval.

The reaction of fire of the joint filling rope "SG 300" has not been verified when the joint filling rope is used with additional construction products.

5 Indications to the manufacturer

5.1 Packaging, transport and storage

Joint filling ropes shall be protected from damage, weather exposure and detrimental effects of moisture by appropriate measures, e. g. by covering with foils.

For further details on packaging, transport and storage follow the manufacturer's instructions.

5.2 Use, maintenance, repair

5.2.1 The fire protection properties of joint sealing using the joint filling rope "SG 300" shall not be affected by future changes to buildings or building elements.

5.2.2 The evaluation of serviceability is based on the assumption that any damage caused by impacts or contamination can be repaired by replacing and renewing damaged parts of the joint filling rope.

5.2.3 Horizontal floor joints shall be protected from stepping or damaging by taking appropriate protective measures. For further details follow the manufacturer's instructions.

Evaluation of the fire resistance of joint filling rope using such protective measures is not part of this European technical approval.

Prof. Gunter Hoppe
Head of Department

beglaubigt:
von Hoerschelmann

Dimensions and nominal bulk density of the joint filling rope "SG 300"

Table 1.0 shows the dimensions (nominal diameter depending on the joint width to be sealed) and the nominal bulk density of the joint filling rope "SG 300".

Table 1.0

nominal diameter [mm]	joint width b [mm]	bulk density [kg/m ³]
12	≤ 10	≥ 440
15	≤ 12	≥ 288
20	≤ 17	≥ 224
30	≤ 27	≥ 208
40	≤ 37	≥ 196
50	≤ 47	≥ 224
60	≤ 55	≥ 200

Installations using the joint filling rope "SG 300"

Table 1.1 provides an overview of the permitted applications.

Table 1.1

Application (A)	Application (B)	Application (C)
Horizontal joints in or between floors or between walls and floors	Vertical joints in or between walls	Horizontal joints between floors and walls
<p>joint filling rope with/without shear stress</p> <p>joint filling rope</p> <p>Ceiling/ Floor</p> <p>joint filling rope</p> <p>Wall</p>	<p>joint filling rope</p> <p>joint filling rope</p>	<p>joint filling rope with/without shear stress</p>

For the number of layers and the arrangement of the joint filling rope, see Table 2.0 and 2.1 and the manufacturer's instructions.

joint filling rope "SG 300"

Description of the building product and overview of the permitted applications

Annex 1

Fire-resistant designs evaluated by this European technical approval

The joint filling rope "SG 300" is used for sealing linear joints in or between the following separating building elements according to section 1.2.1:

- rigid walls
 - aerated concrete with a minimum density of 700 kg/m³
 - concrete, reinforced concrete or masonry with a minimum density 2400 kg/m³ ± 20 %
- rigid floors
 - aerated concrete with a minimum density of 700 kg/m³
 - concrete or reinforced concrete with a minimum density 2400 kg/m³ ± 20 %

Table 2.0 provides an overview of the fire-resistant designs for the installation in rigid floors with a minimum thickness of 150 mm and a minimum density of 700 kg/m³.

Table 2.0

application	joint width [mm]	"SG 300" number of layers and arrangement		classification fire resistance
(A) (B)	10 to 55	1	any arrangement within the joint	EI 90-V-X-F-W 10 to 55 EI 90-H-X-F-W 10 to 55
(A) (B)	55	1		EI 120-V-X-F-W 55 EI 120-H-X-F-W 55

Table 2.1 provides an overview of the fire-resistant designs for the installation in rigid wall constructions and rigid floor constructions with a minimum thickness of 150 mm and a minimum density of 2400 kg/m³ ± 20 %.

Table 2.1

application	joint width [mm]	"SG 300" number of layers and arrangement		classification fire resistance
(A) (C)	10 to 50	2	One strip on each side, minimum distance 25 mm to the outer edge of the building element	EI 90-H-M 65-F-W 10 to 50
(A) (B)	10 to 55	2	layers arranged close together, any arrangement within the joint	EI 120-V-X-F-W 10 to 55 EI 120-H-X-F-W 10 to 55
(A) (B)	10 to 27 37 to 55	4 3		EI 180-V-X-F-W 10 to 55 EI 180-H-X-F-W 10 to 55

For the choice of the suitable joint filling rope (nominal diameter depending on the joint width to be sealed) see Table 1.0.

joint filling rope "SG 300"

Fire-resistant designs - Installation in rigid walls and floors with a minimum thickness of 150 mm and a minimum density of 700 kg/m³ or 2400 kg/m³ ± 20 % -

Annex 2

Installation of the joint filling rope "SG 300"

1. General

- 1.1 Before installing, all conditions are to be checked for compliance (e. g. type and thickness of the separating building elements, width of the joints, arrangement and number of layers of the joint filling rope) with the provisions of section 1.2 and Annexes 1 and 2.
- 1.2 It shall be ensured that the assumptions under which the fitness of the product for the intended use was evaluated are complied with (see Section 4).

2. Installation

- 2.1 Before installing the joint filling rope, the joints are to be cleaned of any contamination such as loose fragments of building elements or remains of installation foams.
- 2.2 The joint filling rope "SG 300" is cut with an additional length of approximately 10 mm. The joint filling rope is inserted into the joint and compressed with an appropriate tool.
- 2.3 The joint filling ropes shall be installed overlapped. For joints
 - with a single-layer arrangement the joint filling ropes shall overlap a minimum of 100 mm,
 - with a multi-layer arrangement the joints of the joint filling rope shall be arranged 500 mm shifted to each other.
- 2.4 For joints with vertical shear stress, the joint filling ropes shall be installed with a minimum distance of 25 mm to the outer edge of the building element. For arrangement and number of layers of the joint filling rope, see Annexes 1 and 2.
- 2.5 During the construction phase, joints filled with the joint filling rope shall be protected against weather exposure and moisture by appropriate measures, e. g. by covering with foils.
- 2.6 The joint filling rope may be fixed with suitable non-combustible adhesives (e. g. "litaflex-Kleber 800") in the inside surface of the building element. For further details follow the manufacturer's instructions.
- 2.7 The joint filling rope may be installed with suitable permanently elastic sealing compounds (e.g. "Sikaflex Pro 1FC"), coatings or coverings. For further details follow the manufacturer's instructions.
- 2.8 Apart from this, the specifications of the manufacturer's instructions of installation apply.

joint filling rope "SG 300"

Installation of the joint filling rope

Annex 3

List of reference documents

ETAG No 026-1 (Edition January 2008)
Guideline for European Technical Approval for Fire Stopping and Fire Sealing Products - Part 1: General

ETAG No 026-3 (Edition February 2008 and Progress File August 2011)
Guideline for European Technical Approval for Fire Stopping and Fire Sealing Products - Part 3: Linear joint and gap seals

EN 13501-1:2010-01 Fire classification of construction products and building elements
- Part 1: Classification using data from reaction to fire tests

EN 13501-2:2010-02 Fire classification of construction products and building elements
- Part 2: Classification using data from resistance tests, excluding ventilation services

EN ISO 1182:2010-10 Reaction to fire tests for products – Non-combustibility test (ISO 1182:2010)

EN ISO 1716 Reaction to fire tests for products – Determination of the gross heat of combustion (calorific value) (ISO 1716:2010)

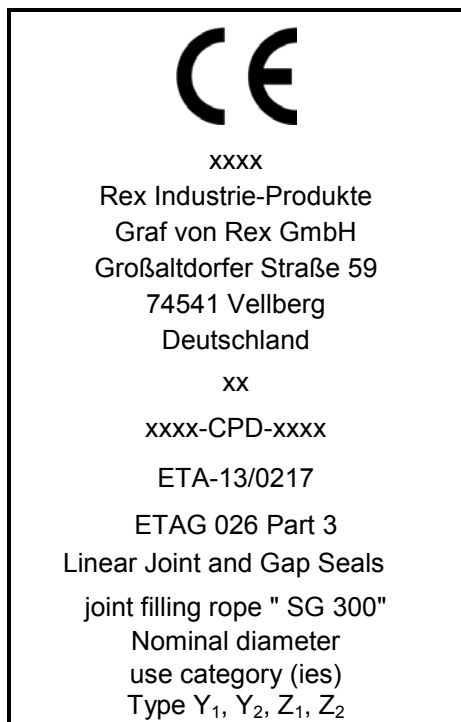
EN 1363-1:2012-10 Fire resistance tests – Part 1: General requirements

EN 1366-4:2010-08 Fire resistance tests for service installations – Part 4: Linear joint seals

EN 13162:2009-02 Thermal insulation products for buildings – Factory made mineral wool (MW) products – Specification

Electronic copy of the ETA by DIBt: ETA-13/0217

joint filling rope "SG 300"	Annex 4
Reference documents	



"CE" marking

Identification number of notified certification body

Name and address of the producer (legal entity responsible for the manufacturer)

Two last digits of year of affixing CE marking.

Number of EC certificate of conformity

ETA number

ETAG number

Linear Joint and Gap Seals

Designation of the product (trade name)

Nominal diameter

use category (ies)

See ETA-13/0217 for other relevant characteristics (i.e. fire resistance class, dangerous substances)

joint filling rope "SG 300"

Example of CE marking

Annex 5