

## National Technical Approval

Approval body for construction products and  
types of construction Building Technology Board

A statutory body jointly financed by the Federal  
Government and the States

Member of EOTA, UEAtc and WFTAO

Date:

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24 April 2018

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**Approval number:**

**Z-56.25-3573**

**Applicant:**

**Trevira GmbH**

Max-Fischer-Straße 11  
86399 Bobingen

**Period of validity**

from: **2 May 2018**

to: **2 May 2023**

**Approved article:**

**'Trevira CS' and 'Trevira CS plus NSK...' fabrics as fire-resistant building materials**

The approved article mentioned above herewith receives national technical approval. This approval  
comprises six pages.

The article first received national technical approval on 2 May 2013.

DIBt



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## **I GENERAL PROVISIONS**

- 1 With the national technical approval, the usability and applicability of the approved product is proven within the scope of the state building codes.
- 2 This national technical approval does not replace the statutory approvals, consents, and certificates needed to carry out construction projects.
- 3 This national technical approval is granted without prejudice to the rights of third-party suppliers, in particular private property rights.
- 4 Without prejudice to further regulations in the 'Special Provisions' section, the manufacturer and distributor of the approved product shall make copies of this national technical approval available to users of the approved product and advise them this national technical approval must be available on site. Copies of this national technical approval shall be made available to the authorities in charge upon request.
- 5 This national technical approval may only be copied in its entirety. Any publication of excerpts requires the approval of Deutsches Institut für Bautechnik [German Institute for Building Technology]. The text and illustrations in advertising brochures must not contradict this national technical approval. Translations of this national technical approval must include the note 'translation of the original German document not verified by Deutsches Institut für Bautechnik'.
- 6 This national technical approval may be cancelled at any time. The provisions provided in the national technical approval may be supplemented or changed at a later date, in particular if new technical information makes it necessary.
- 7 This approval applies to the information and documents supplied by the applicant during the process of approval for the approved product. Changes made to the basis of approval are not included in this approval and must be immediately reported to Deutsches Institut für Bautechnik.

## II SPECIAL PROVISIONS

### 1 Approved product and scope of use

#### 1.1 Approved product

This national technical approval applies to the manufacture and use of fabrics of modified polyester called 'Trevira CS' and 'Trevira CS plus NSK' as fire-resistant building materials with a fire behaviour of class B-s1, d0 pursuant to DIN EN 13501-1<sup>1,2</sup>

The 'Trevira CS plus NSK' fabric can additionally be equipped with an aluminium coating at the factory.

#### 1.2 Scope of use

1.2.1 This national technical approval only applies to the fire behaviour of the building materials.

1.2.2 The coated or non-coated fabrics can be used inside of structural facilities as privacy curtains and sunshade units or as permanently installed stage curtains as fire-resistant building materials (class B-s1, d0 pursuant to DIN EN 13501-1<sup>1,2</sup>).

1.2.3 A distance of  $\geq 80$  mm shall be maintained to equal or other adjacent construction materials.

1.2.4 The fire behaviour is not proven if the fabric has been covered with paint, coatings, or other similar substances not included in the description of the approved product in Section 1.1.

1.2.5 The fabrics must not be exposed to weather outdoors.

### 2 Provisions for the construction product

#### 2.1 Properties and composition

2.1.1 The fabric must consist of polyethylene terephthalate with integrated fire prevention equipment.

The 'Trevira CS' fabric must consist of fire-resistant polyester fibres.

The 'Trevira CS plus NSK' fabric must consist of fire-resistant polyester fibres that are supplemented by a low melting polyester component.

The 'Trevira CS plus NSK, aluminised' fabric must additionally be provided with an aluminium coating by means of vaporisation.

The yarns used to manufacture the fabrics may be coloured in different shades.

2.1.2 Weight and thickness of the fabric must comply with the values specified in Table 1. They may exceed or fall short of the nominal values by a maximum of 10%.

2.1.3 When installed at a distance of  $\geq 80$  mm to equal or other adjacent construction products, the fabrics must comply with the fire behaviour of construction products of class B-s1, d0 pursuant to DIN EN 13501-1<sup>1,2</sup>, Section 11 (see also Table 1).

1 DIN EN 13501-1:2010-01 Classification of construction products and types of construction with regard to their fire behaviour; Part 1: Classification in conjunction with the results of the fire behaviour testing of construction products.

2 Note: Please note that the classification in a building product class pursuant to DIN EN 13501-1 is a preliminary decision due to a lack of harmonised European standards. Future harmonised product specifications may determine alternate testing conditions that may require retesting.

Table 1

Name	Total thickness [mm]	Weight (nominal value) [g/m <sup>2</sup> ]	Fire behaviour pursuant to DIN EN 13501-1 <sup>1 2</sup>
'Trevira CS'	0.15-1.0	48-590	Class B-s1, d0; only at a distance of ≥80mm to adjacent construction products
'Trevira CS plus NSK'	0.3 - 0.5	115-300	
'Trevira CS plus NSK' aluminised	0.3 - 0.5	110-225	

**2.1.4** The composition of the individual building materials must comply with the information filed with the Deutsches Institut für Bautechnik.

Changes must only be made with the approval of Deutsches Institut für Bautechnik.

**2.2 Production and marking**

**2.2.1 Production**

For the production of the construction product, the provisions in Section 2.1 shall be observed.

**2.2.2 Marking**

The fabric, its packaging, the information leaflet or the delivery note must be marked by the manufacturer with the mark of conformity (the German Ü mark) according to the conformity mark ordinances of the individual states. Marking is only permitted if the prerequisites as per Section 2.3 are fulfilled.

The following information must be included on the package, information leaflet or delivery note of the construction product:

- Name of the product
- Mark of conformity (Ü mark) to include
  - Manufacturer's name
  - Approval number: Z-56.25-3573
  - Symbol or name of the certifying body
  - Manufacturing plant<sup>3</sup>

Fire behaviour: fire-resistant (class B-s1, d0 pursuant to DIN EN 13501-1) – only at a distance of ≥80mm to equal or other adjacent construction products.

**2.3 Certificate of conformity**

**2.3.1 General**

Certification of conformity of the construction product with the provisions of this national technical approval shall be provided for each manufacturing plant along with a declaration of conformity on the basis of an internal factory production control, a certificate of conformity from an approved certification body and regular third-party inspections in accordance with the following provisions:

In order for the certificate of conformity to be granted and the third-part inspection including the product tests to be performed in this context, the manufacturer of the construction product shall engage the services of a certification body and an inspection body approved for furnishing proof of fire behaviour according to serial no. 23/3 of the 'List of Testing Laboratories, Inspection Bodies and Certification Bodies in Accordance with the Building Codes of the German Federal States'<sup>4</sup>, Part IIa.

<sup>3</sup> The name of the manufacturing plant may also be encoded. The applicant must provide the testing laboratory, inspection body and certification body engaged to issue the certificate of conformity with the list of codes and corresponding manufacturing plants.

<sup>4</sup> Last electronic publication on the DIBt website at [www.dibt.de](http://www.dibt.de) ->Testing Laboratories, Inspection Bodies and Certification Bodies/Notified bodies -> National ->List of Testing Laboratories, Inspection Bodies and Certification Bodies, Version May 2017

The manufacturer shall make a declaration confirming that a certificate of conformity was issued by marking the construction products, their packaging or the information leaflet with the mark of conformity (Ü mark) and indicating the designated use.

A copy of the certificate of conformity shall be supplied by the certification body to Deutsches Institut für Bautechnik.

### 2.3.2 Internal factory production control

In each manufacturing plant that produces the uncoated and coated fabric, an internal factory production control must be established and implemented. An internal factory production control refers to the continuous inspection of production by the manufacturer to guarantee that the construction products manufactured by the plant meet the provisions of this national technical approval.

In order to perform the internal factory production control, the latest version of the 'guidelines for the proof of conformity of fire-resistant building materials (Class DIN 4102-B1 for building materials) in accordance with the national technical approval'<sup>5</sup> shall be applied *mutatis mutandis*.

The results of the internal factory production control shall be recorded and analysed. The records must contain the following information as a minimum:

- Name of the construction product or starting material and its components
- Type of control or testing
- Date of manufacture and testing of the construction product and the starting material or its components
- Results of the control procedures and tests and, if applicable, a comparison with the requirements
- Signature of the individual responsible for the internal factory production control

The records must be kept for a minimum of five years and be presented to the inspection body engaged for third-party inspection. Upon request, they shall be submitted to Deutsches Institut für Bautechnik and the highest responsible construction supervisory authority.

If the test result is inadequate, the manufacturer shall immediately take any necessary measures to correct the fault. Construction products that do not meet the requirements shall be handled in such a manner as to exclude any confusion with products that do meet the requirements. As soon as the fault is corrected the corresponding testing shall be repeated immediately, if technically possible and required to furnish proof of the correction of the fault.

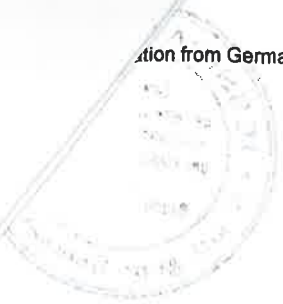
### 2.3.3 Third-party inspection

In each manufacturing plant that produces the uncoated or coated fabric, the internal factory production control shall be reviewed by means of third-party inspection at regular intervals, however, at least once a year.

In order to perform the inspection, the 'guidelines for the proof of conformity of fire-resistant building materials (Class DIN 4102-B1 for building materials) in accordance with the national technical approval'<sup>5</sup> shall be applied *mutatis mutandis*.

In the process of providing third-party inspection, an initial testing of the construction product shall be performed and samples taken in accordance with the 'guidelines...' mentioned above and tested. Random samples may also be taken. Sampling and testing are the responsibility of the approved inspection body.

5 Last published in the 'Notifications' of the Deutsches Institut für Bautechnik, Issue No. 2 of 1 April 1997



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The results of the certification and the third-party inspection must be kept for a minimum of five years. Upon request, they shall be submitted by the certification body and/or the inspection body to Deutsches Institut für Bautechnik and the highest responsible construction supervisory authority.

Peter Proschek  
Head of Unit

Certified [Signature]  
[Round seal of the Deutsches Institut für Bautechnik]

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Tübingen, den 3.6.2018

JESSICA WALLACE  
Staatl. gepr. Übersetzerin

