

**General
Building Inspectorate
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:

2 May 2013

Reference:

III 47-1.56.2-64/12

Approval number:

Z-56.25-3573

Period of validity

from: **2 May 2013**

until: **2 May 2018**

Applicant:

**Trevira GmbH
Max-Fischer-Straße 11
86399 Bobingen**

Approved article:

'Trevira CS' and 'Trevira CS plus LMC ...' tissues as fire resistant construction materials

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The approved article mentioned above herewith receives general building inspectorate approval.

This general building inspectorate approval comprises six pages.

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I GENERAL PROVISIONS

- 1 When general technical approval is granted the usability and applicability of the approved product is proven within the scope of the state building codes.
- 2 As far as requirements to the special expertise and experience of the individuals in charge of manufacturing construction products and types of construction pursuant to the Model Building Regulations, Section 17, Para 5 are posed to the pertinent state regulations it should be observed that proof of this expertise and experience may also be furnished through equal proof of other member states of the European Union. This may also apply to equal proofs submitted in the context of the Agreement on the European Economic Area (EEA) or other bilateral agreements.
- 3 This general building inspectorate approval does not replace the statutory approvals, consents and certificates needed to perform construction projects.
- 4 This general building inspectorate approval is granted without prejudice to the rights of third party suppliers, in particular private property rights.
- 5 Without prejudice to further regulations in the 'Special Provisions' section the manufacturer and distributor of the approved product shall make copies of this general building inspectorate approval available to the user and/or consumer of the approved product and point out that this general building inspectorate approval must be available on site. Copies of this general building inspectorate approval shall be made available to the authorities in charge upon request.
- 6 Only the whole of this general building inspectorate approval may be copied. Any publication in excerpts requires approval by the German Institute for Building Technology. The text and drawings of advertising flyers must not contradict this general building inspectorate approval. Translations of this general building inspectorate approval must include the note 'translation of the original German source-language document not verified by the German Institute for Building Technology'.
- 7 This general building inspectorate approval may be cancelled at any time. The provisions provided in this general building inspectorate approval may be added on or changed at a later date, in particular when new technical knowledge may require such a procedure.

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II SPECIAL PROVISIONS

1 Approved product and scope

1.1 Approved product

This general building inspectorate approval applies to the manufacture and use of tissues of modified polyester called 'Trevira CS' and 'Trevira CS plus LMC' as flame resistant building materials with a fire behavior of class B-s1,d0 pursuant to DIN EN 13501-1^{1,2}.

The 'Trevira CS plus LMC' tissue can additionally be provided with aluminum coating at the factory.

1.2 Scope

1.2.1 The coated or non-coated tissues can be used in the interior area of structural facilities as vision protection and sunshade units or as permanently installed stage curtains.

1.2.2 A distance of ≥ 80 mm shall be maintained to equal or other adjacent construction products.

1.2.3 These tissues must not be exposed to weather in outdoor areas.

2 Provisions for the construction product

2.1 Properties and composition

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

The 'Trevira CS' tissue must consist of flame resistant polyester fibers.

The 'Trevira CS plus LMC' tissue must consist of flame resistant polyester fibers which are supplemented by a low melting polyester component.

The 'Trevira CS plus LMC, aluminized' tissue must additionally be provided with an aluminum coat by means of vaporization.

The fibers for manufacturing the tissues may be colored in different shades.

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1 DIN EN 13501-1:2010-01 Classification of construction products and types of construction with regard to their fire behavior, Part I: classification along with the results of the fire behavior testing of construction products.

2 Note: It is pointed out that the classification into a construction product class pursuant to DIN 13501-1 is a preliminary decision due to lack of harmonized European standards. Future harmonized product specifications may determine alternate testing conditions which may require retesting.

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2.1.2 Weight as well as thickness of the tissue must comply with the values specified in table 1. The nominal values may exceed or fall short of 10% maximum.

Table 1

Name	Total thickness [mm]	Weight (nominal value) [g/m ²]	Fire behavior pursuant to DIN EN 13501-1 ^{1, 2}
'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 LMC'	0.3 – 0.5	115-300	
'Trevira CS plus LMC', aluminized	0.3 – 0.5	110-225	

2.1.3 Arranged at a distance of ≥80mm to equal or other adjacent construction products the tissues must comply with the requirements for the fire behavior of construction products of class B-s1,d0 pursuant to DIN EN 13501-1^{1,2}, Section 11.

2.1.4 The composition of the individual construction materials must comply with information filed with the German Institute for Building Technology.

Changes shall only be made with the approval by the German Institute for Building Technology.

2.2 Manufacture and marking

2.2.1 Manufacture

When manufacturing the construction product the provisions in Section 2.1 shall be observed.

2.2.2 Marking

Packaging of the construction product, 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 shall only be performed if the prerequisites as per Section 2.3 are fulfilled.

Information below 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
 - License number: Z-56.25-3573
 - Symbol or name of the certifying authority
 - Manufacturing company
- Fire behavior: 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.

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2.3 Certificate of conformity

2.3.1 General

Certification of conformity of the construction product with the provisions of this general building inspectorate approval shall be provided subject to the following provisions for each manufacturing company on the basis of a factory production control system and regular third-party inspection to include initial inspection of the construction product on the basis of the following provisions:

To grant the certificate of conformity and for third-part inspection to include the product tests to be performed in this context the manufacturer of the construction product shall engage the services of a certification authority as well an approved inspection authority approved for furnishing proof of fire behavior according to no. 23/3 of the 'register of testing, inspection and certification authorities in accordance with the state construction laws'³, Part IIa.

The manufacturer shall make a declaration confirming that a certificate of conformity was issued by marking the construction products, its package or the information leaflet with the mark of conformity (Ü mark) and making reference to its use.

A copy of the certificate of conformity shall be furnished by the certification authority to the German Institute for Building Technology.

2.3.2 Factory production control system

In each manufacturing company a factory production control system must be established and implemented. Factory production control system means the continuous inspection of production by the manufacturer to guarantee that the construction products manufactured by him meet the provisions of this general building inspectorate approval.

To perform factory production control the latest version of the 'guidelines for the proof of conformity of fire resistant construction materials (construction class DIN 4102-B1) in accordance with the general building inspectorate approval'⁴ shall be applied mutatis mutandis.

The results of factory production control shall be recorded and analyzed. 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 or 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 factory production control

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³ Last electronically published in the 'Notifications' of the German Institute for Building Technology under www.dibt.de - > PÜZ parts -> PÜZ inventory 2012

⁴ Last published in the 'Notifications' of the German Institute for Building Technology, Issue No. 2 of 1 April 1997.

The records must be kept for a minimum of five years and be furnished to the inspection authority engaged for third-party inspection. On request they shall be submitted to the German Institute for Building Technology and the responsible highest construction supervision authority.

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

2.3.3 Third-party inspection

In each manufacturing company factory production control shall be checked by means of third-party inspection at regular intervals, however, at least once a year. To perform inspection the 'guidelines for the proof of conformity of fire resistant construction materials (construction class DIN 4102-B1) in accordance with the general building inspectorate approval³ shall be applied mutatis mutandis.

In the process of providing third-party inspection initial testing of the construction product shall be performed and samples for random checks may also be taken. Taking of samples and testing is the responsibility of the approved inspection authority.

The results of certification and third-party inspection must be kept for a minimum of five years. On request they shall be submitted by the certification authority and/or the inspection authority to the German Institute for Building Technology and the responsible highest construction supervision authority.

3 Provisions for dimensioning

If the provisions of this general building inspectorate approval are observed the tissues are considered to be fire-resistant construction materials.

4 Provisions for execution

4.1 The provisions of Section 1.2 shall be observed.

4.2 Fire behavior is not proven if in addition to the description of the approved article pursuant to Section 1.1 the tissues shall be provided with paints, coatings or the like.

Peter Proschek
Head of Unit

Certified
/s/ Linknet

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I, the undersigned, hereby certify that the above is a true and complete translation of the original document in the German language to the best of my knowledge and belief.

Rita Kramer, date of birth: February 8th, 1959,

place of residence: Forstweg 9, 69123 Heidelberg,

sworn translator, duly appointed by the Heidelberg Regional Court

Heidelberg, this 17th day of May 2013

