SLOVENSKI STANDARD
SIST EN 16724:2016

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Toplotnoizolacijski proizvodi za uporabo v gradbeništvu - Navodila za vgradnjo in pritrjevanje za preskušanje odziva na ogenj zunanjih sestavljenih toplotnoizolacijskih sistemov (ETICS)

Thermal insulation products for building applications - Instructions for mounting and fixing for determination of the reaction to fire testing of external thermal Insulation composite systems (ETICS)

Wärmedämmstoffe für Gebäude - Einbau- und Befestigungsbedingungen für die Prüfung des Brandverhaltens von außenseitigen Wärmedämm-Verbundsystemen (WDVS)

Produits isolants thermiques pour le bâtiment - Instructions de montage et de fixation pour l'essai de réaction au feu des systèmes composites d'isolation thermique par l'extérieur (ITE)

Ta slovenski standard je istoveten z: **EN 16724:2015**

ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials

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English Version

Thermal insulation products for building applications - Instructions for mounting and fixing for determination of the reaction to fire testing of external thermal Insulation composite systems (ETICS)

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European foreword

This document (EN 16724:2015) has been prepared by Technical Committee CEN/TC 88 “Thermal insulating materials and products”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

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1 Scope

This European Standard specifies instructions for mounting and fixing for reaction to fire testing for External Thermal Insulation Composite Systems (ETICS) and gives rules for the field of application of test results.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

EN 13501-1:2007+A1:2009, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 13823, *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 15725, *Extended application reports on the fire performance of construction products and building elements*

EN ISO 1182, *Reaction to fire tests for products - Non-combustibility test (ISO 1182)*

EN ISO 1716, *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716)*

EN ISO 9229, *Thermal insulation - Vocabulary (ISO 9229)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 9229 and the following apply.

3.1
gross heat of combustion
Q_{PCS}
heat of combustion of a substance when the combustion is complete and any produced water is entirely condensed under specified conditions

Note 1 to entry: The gross heat of combustion is expressed in mega joules per kilogram.

3.2
adhesive
component used for bonding the thermal insulation product to the substrate

3.3
anchors for thermal insulation products
fixing device consisting of a plate for fixing the thermal insulation product and if appropriate also the reinforced base coat, a sleeve which passes through the thermal insulation product and a part which is embedded or otherwise affixed to the substrate

3.4
anchors for profiles and rails
device for fixing the profiles or rails to the substrate

3.5
ancillary material
any supplementary component used in addition to the kit, which shall be used according to system holders application rules

Note 1 to entry: Ancillary materials are used e.g. to form joints or to achieve continuity or to give specific protection (mastics, joint-covers, corner stripes, corner profiles, base profiles, fire barriers etc.)

3.6
base coat
component applied directly by rendering on to the thermal insulation product

3.7
component
group of factory-made products fulfilling the same functions as a part of the design ETICS

3.8
finishing coat
component applied to the reinforced base coat, possibly preceded by a key coat

3.9
glass fibre mesh as reinforcement
textile fabrics consisting of continuous glass filament yarn in both the warp and the weft directions embedded in the base coat

3.10
metal mesh as reinforcement
galvanized steel or stainless steel mesh fixed with anchors embedded in the reinforced base coat

3.11
mechanical fixing device
device for fixing assembled kits to the substrate

EXAMPLE Rails, anchors, profiles

3.12
substrate
part of the wall/test assembly to which the kit is fixed

3.13
substantial components
material that constitutes a significant part of a non-homogeneous product. A layer with a mass/unit area ≥ 1,0 kg/m^2 or a thickness ≥ 1,0 mm is considered to be a substantial component

[SOURCE: EN 13501-1:2007+A1:2009, 3.1.5]

3.14
non-substantial components
material that does not constitute a significant part of a non-homogeneous product. A layer with a mass/unit area < 1,0 kg/m^2 and a thickness < 1,0 mm is considered to be a non-substantial component

Note 1 to entry: Two or more non-substantial layers that are adjacent to each other (i.e. with no substantial component(s) in between the layers) are regarded as one non-substantial component when they collectively comply with the requirements for a layer being a non-substantial component.

[SOURCE: EN 13501-1:2007+A1:2009, 3.1.6]

3.15
organic content
total amount of organic substances as part of a component or a product related to the mass in cured and dried conditions

Note 1 to entry: Will be declared by the system holder according to the formulation of the product in question and will be determined by calculation. It is given in percentage by mass in cured and dried condition.

3.16
worst case
configuration of specified ETICS components for test purposes that leads to the most discriminating class or level of a certain characteristic which leads to results valid for a group of configurations with assumed equal or better performance

Note 1 to entry: Characteristics can be e.g. impact resistance, reaction to fire, etc.

4 Principle

The reaction to fire classification (Euro classes) shall be determined in accordance with EN 13501-1, respecting the test conditions of the ETICS laid down in this standard.

In order to evaluate the reaction to fire all kits of the design ETIC system as well as the individual components shall be considered. Test results may be also valid for the assessment of the reaction to fire of further design ETICS. Rules are given below.

NOTE 1 A European reference fire scenario has not been laid down for facades. In some Member States, the classification of ETICS according to EN 13501–1 might not be sufficient for the use on facades. An additional assessment of ETICS according to national provisions (e.g. on the basis of large scale tests) might be necessary to comply with Member State regulations, until the existing European classification system has been completed.

NOTE 2 In some Member States the requirements might exist to demonstrate the behaviour of products with respect to continuous glowing combustion in the case of fire. Additional national assessments e.g. on the basis of national procedures to demonstrate this behaviour might be required until a European harmonized procedure will be available.

5 Instructions for mounting and fixing, field of application

5.1 General

This clause gives instructions for mounting and fixing for reaction to fire testing of a kit and its single components.

This clause includes the field of application of the test results of the kits as well as of its single components.

Base coats shall be grouped according to the binder type into inorganic (cement-calcium hydroxide, alkali silicate, etc.) and organic (silicon resin, synthetic resin, etc.) coats. Finishing coats shall be grouped in the same way.

For each group of base coats and finishing coats the product with the highest organic content shall be tested in combination with the adhesive having the highest organic content. If there are only differences in the organic content but no difference in the organic component itself, the product with the highest organic content shall be tested.

The test results are valid also for adhesives, base coats and finishing coats with equal or lower organic content.

If adhesives, base coats or finishing coats include flame retardants, those components with the lowest amount of flame retardant shall be tested additionally.

The key coat and the decorative coat may be neglected if the layer thickness of each coat is less than 200 µm and the organic content is less than 5 %.

NOTE The layer thickness may be calculated by the coverage.

Key coat and decorative coat shall be considered for testing unless it can be neglected according to the rules mentioned in the paragraph before. The key coat and the decorative coat with the highest PCS-value (according to EN ISO 1716) shall be used for preparing the specimens.

5.2 Testing according to EN ISO 1182 (Non-combustibility test)

5.2.1 General

This test method is relevant for the classes A1 and A2.

For classes A1 and A2 every substantial component (3.12) shall be tested.

Mechanical fixing devices and ancillary materials which are not continuous but discrete components of an ETICS shall not be considered for testing and classification regarding non-combustibility.

NOTE Base coats, finishing coats and adhesives in accordance with the provisions of EC decision 96/603/EC (amended by decisions 2000/605/EC and 2003/424/EC) are considered to satisfy the requirements for performance class A1 without the need for testing.

5.2.2 Base coat and finishing coats

The reaction to fire behaviour of base coats and finishing coats not falling under EC decision 96/603/EC (amended by decisions 2000/605/EC and 2003/424/EC) shall be tested by using the product with the highest amount of organic content. The test result is then also valid for all products with lower organic content.

5.2.3 Reinforcement

Each product identified as a substantial component shall be tested. Products falling under EC decision 96/603/EC (amended by decisions 2000/605/EC and 2003/424/EC) need not to be tested.

5.2.4 Thermal insulation products

The reaction to fire classification of each thermal insulation product shall be declared according to the respective sub clause on reaction to fire of the product as placed on the market of the relevant product standard or other harmonized technical specification.