SLOVENSKI STANDARD
SIST EN 13772:2003

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Tekstil in tekstilni izdelki - Gorljivost - Zavese in zastori - Merjenje razširjanja plamena navpično nameščenih preskušancev z velikim začetnim vžigom

Textiles and textile products - Burning behaviour - Curtains and drapes - Measurement of flame spread of vertically oriented specimens with large ignition source

Textilien und textile Erzeugnisse - Brennverhalten von Vorhängen und Gardinen - Messung der Flammenausbreitungseigenschaften von vertikal angeordneten Messproben bei Einwirkung großer Zündquellen

Textiles et produits textiles - Comportement au feu - Rideaux et tentures - Mesurage de la propagation de flamme d'éprouvettes orientées verticalement avec une grande source d'allumage

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Textiles and textile products - Burning behaviour - Curtains and drapes - Measurement of flame spread of vertically oriented specimens with large ignition source

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This European Standard was approved by CEN on 11 December 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

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Foreword

This document (EN 13772:2003) has been prepared by Technical Committee CEN/TC 248 "Textiles and textile products", the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by August 2003, and conflicting national standards shall be withdrawn at the latest by August 2003.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The standard EN ISO 6941 measures the flame spread of vertically oriented specimens ignited with a defined small flame**.** There is however a risk that products not ignitable with a small flame can be ignited with a more severe ignition source.

The equipment used in EN ISO 6941 has therefore been modified with a radiator, which radiates on the lower part of the specimen. The combination of this radiation and the small flame application simulates the action from a larger flaming source, e.g. a burning waste paper basket.

This European Standard evaluates flame spread using this more severe ignition source. With this combined ignition source some materials, not ignitable with the small flame, may ignite. Some of these will self extinguish, when the action from the ignition source has ceased, while others will self propagate.

1 Scope

This European Standard specifies a method for the measurement of flame spread of vertically oriented textile fabrics intended for curtains and drapes in the form of single or multi-component (coated, quilted, multilayered, sandwich construction and similar combinations) fabrics using a large ignition source.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated reference, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 367:1992, *Protective clothing - Protection against heat and fire - Method of determining heat transmission on exposure to flame*

EN ISO 3175, *Textiles - Evaluation of stability to machine dry-cleaning (ISO 3175:1995)*

EN ISO 6330, *Textiles - Domestic washing and drying procedure for textile testing (ISO 6330:2000)*

EN ISO 6941, *Textile fabrics - Burning behaviour - Measurement of flame spread properties of vertically oriented specimens (ISO 6941:1984, including Amendment 1:1992)*

3 Term and definition

For the purposes of this European Standard, the following term and definition applies:

3.1
flaming debris
material separating from the specimen during the test procedure, falling below the initial edge of the specimen and igniting a filter paper

4 Principle

A heat flux of a defined energy is applied to a specified area of the lower part of the backside of the vertical specimen. After a period of exposure (30 s), the small flame defined in EN ISO 6941 is applied for 10 s to a small piece of cotton fabric fixed around the bottom edge of the specimen.

The possible flame spread is measured through the severance of marker threads.

5 Health and safety of test operator

Burning materials may produce smoke and toxic gases which can affect the health of operators. Between tests the atmosphere of the testing location, which should be of adequate dimensions to avoid endangering the health of operators, should be cleared of smoke and fumes by an extractor fan or other means of ventilation.

6 Apparatus and materials

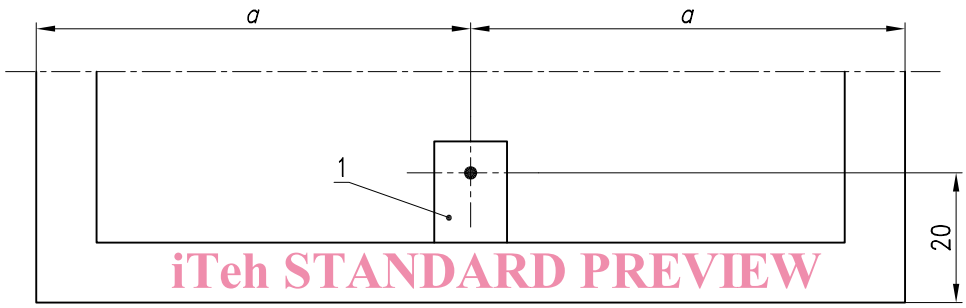
6.1 General

This standard uses the equipment according to EN ISO 6941 modified as below.

6.2 Specimen holder

The specimen holder according to EN ISO 6941 has to be modified. To prevent the cotton cloth from falling down the specimen holder shall be equipped with an extra pin positioned centrally 20 mm from the bottom of the specimen on the holder (see below Figure 1).

Dimensions in millimetres



Key

1 extra pin

Figure 1 — Lower part of the specimen holder according to EN ISO 6941 equipped with an extra pin

6.3 Electric radiator [1)]

This radiator is made in a ceramic material and radiates over a circular area with the diameter (100±5) mm. The radiator is heated by an electric resistor, formed in a spiral, which is covered by a (1-1,5) mm thick layer of transparent quartz.

6.4 Transformer

An electric transformer to set the voltage needed to get the heat radiation according to clause 7.

6.5 Copper disc calorimeter

The calorimeter and allied equipment shall be in accordance with EN 367:1992, 5.2

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1) Such an electric radiator can be found in: Quarts et Silice. B.P. 102. 77793 Nemours Cedex France.

Tél. +33 1 64454600. Model 534 Rc 2S 500 watt.

6.6 Shield

A movable shield is located between the radiator and the specimen. The approximate position is given in Figure 3. The shield shall be at least as wide as the specimen and made in a non-combustible material. It is sufficient if the lowest 200 mm of the specimen is shielded.

NOTE The non combustible material could be for instance metal or mineral silicate.

6.7 Marker threads

The marker threads shall be of pure cotton with a linear density of (45±5) tex.

Only the first and the third marker threads as specified in EN ISO 6941 are used.

The position of the threads is given in Figure 2b. The threads shall be under a tension at least equal to that produced by a weight of 50 g: ± 1 g. A possible arrangement for this is given in the same Figure 2b and 3.

6.8 Gas

Commercial propane gas shall be used.

6.9 Cotton cloth

Bleached fabric, plain weave, weight (160±20) g/m². The material shall be washed one time before use according to EN ISO 6330, programme 2A, drying procedure A, 1g/l of the reference detergent IEC shall be used.

6.10 Staple

To fasten the cotton cloth to the specimen.

6.11 Filter paper

Area specific mass (68±6)g/m², thickness 0,15 mm to 0,16 mm, content of alpha cellulose >95%.

6.12 Metal grid

To be placed horizontally (50±5) mm below the lower edge of the specimen.

6.13 Anemometer

Capable of measuring air speed at a level of (0,1-0,2) m/s.