

SLOVENSKI STANDARD

SIST EN 1102:2016

01-oktober-2016

Nadomešča:
SIST EN 1102:1999

Tekstilije - Gorljivost - Zavese in zastori - Podroben opis postopka za ugotavljanje razširjanja plamena navpično nameščenih preskušancev

Textiles and textile products - Burning behaviour - Curtains and drapes - Detailed procedure to determine the flame spread of vertically oriented specimens

Textilien - Brennverhalten von Vorhängen und Gardinen - Detailliertes Verfahren zur Bestimmung der Flammenausbreitungseigenschaften vertikal angeordneter Proben

Textiles et produits textiles - Comportement au feu - Rideaux et tentures - Procédure détaillée pour déterminer la propagation de flamme d'éprouvettes disposées verticalement

Ta slovenski standard je istoveten z: EN 1102:2016

ICS:

13.220.40	Sposobnost vžiga in obnašanje materialov in proizvodov pri gorenju	Ignitability and burning behaviour of materials and products
97.160	Tekstilije za dom. Perilo	Home textiles. Linen

SIST EN 1102:2016

en,fr,de

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN 1102

August 2016

ICS 13.220.40; 97.160

Supersedes EN 1102:1995

English Version

**Textiles and textile products - Burning behaviour -
 Curtains and drapes - Detailed procedure to determine the
 flame spread of vertically oriented specimens**

Textiles et produits textiles - Comportement au feu -
 Rideaux et tentures - Procédure détaillée pour
 déterminer la propagation de flamme d'éprouvettes
 disposées verticalement

Textilien - Brennverhalten von Vorhängen und
 Gardinen - Detailliertes Verfahren zur Bestimmung der
 Flammenausbreitungseigenschaften vertikal
 angeordneter Proben

This European Standard was approved by CEN on 12 June 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
 COMITÉ EUROPÉEN DE NORMALISATION
 EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 1102:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1102:1995.

The ignitability is determined using a modified EN ISO 6941. These modifications are listed in this document.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 1102:2016 (E)**1 Scope**

This European Standard specifies a procedure to determine the flame spread of textiles for curtains and drapes by testing a vertically oriented specimen in accordance with EN ISO 6941.

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 ISO 6330:2012, *Textiles - Domestic washing and drying procedures for textile testing (ISO 6330:2012)*

EN ISO 6941:2003, *Textile fabrics - Burning behaviour - Measurement of flame spread properties of vertically oriented specimens (ISO 6941:2003)*

ISO 3175 (all parts), *Textiles – Professional care, dry cleaning and wet cleaning of fabrics and garments*¹

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

3.1 attendant fire phenomena
special phenomena occurring during burning such as flaming debris, darting flames, formation of sparks

3.2 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 Sampling

Test samples shall be representative of the materials as used in complete curtains and drapes in accordance with the number and the size of the test specimens required as specified in EN ISO 6941.

5 Cleansing

The sample shall be submitted to the cleansing procedure given on the care label. If no cleansing procedure is prescribed the material shall be submitted to one cycle of the following standard cleansing procedures as appropriate to the fabric:

- wash procedure in accordance with method 4N (40 ± 3) °C of EN ISO 6330:2012 and dried in accordance with method C (flat dry) of EN ISO 6330:2012;
- dry cleaning procedure in accordance with ISO 3175 (all parts).

If the fabric is not intended to be cleansed the test method shall be carried out on sample and specimens as received.

¹ Parts 5 & 6 currently under development.

NOTE This cleansing is not intended as a durability test for flame retardant treatment but only to remove non-durable finishes or contamination and to obtain fabric surface and structure characteristics which are representative of those typically obtained in fabrics during actual use.

6 Test specimen

The test specimens shall be cut from the sample described in Clause 4.

The specimens shall consist of one or more layers of materials according to the construction of the curtain.

Unless otherwise specified the specimen shall not contain features of construction such as seams, pleats, etc. Nevertheless the test specimen shall contain pattern or design features when they are a specific part of the fabric such as a Jacquard construction.

7 Conditioning

Condition the test specimens and the filter paper for at least 24 h in the standard atmosphere of (20 ± 2) °C and (65 ± 5) % relative humidity.

8 Test procedure

8.1 Spread of flame

Spread of flame shall be tested according to EN ISO 6941 using commercial propane gas with the following modifications:

- flame application time shall be 10 s;
- only the first and the third marker thread shall be used;
- the marker threads are spun from pure cotton with a linear density of (45 ± 5) tex.

8.2 Attendant fire phenomena assessment

The fire phenomena shall be assessed using the apparatus described in EN ISO 6941 during the procedure used to determine the flame spread.

8.3 Procedure for the evaluation of flaming debris

Position horizontally, below the test specimen. at a distance of 50 mm from the lower edge of the specimen, on a flat surface, a piece of at least 150 mm x 100 mm of filter paper with the following characteristics:

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

Note whether the filter paper ignites or not.

EN 1102:2016 (E)**8.4 Flame spread rate calculation**

The flame spread rate, V , (in mm/s) shall be calculated using the equation:

$$V = \frac{300}{t_3 - t_1}$$

where

t_1 is the time in seconds from the start of the application of the igniting flame to the severance of the first marker thread;

t_3 is the time in seconds from the start of the application of the igniting flame to the severance of the third marker thread.

9 Test report

The test report shall include the following information:

- a) reference to this European standard;
- b) identification of the fabrics tested;
- c) the cleansing procedure if used or a statement that the material is not intended to be cleansed;
- d) date of test;
- e) ambient conditions of temperature and relative humidity in the area in which the test is carried out;
- f) techniques used to attach fabrics which cannot be supported on the pins;
- g) orientation of the burner for igniting the test specimen, edge or surface ignition;
- h) the following times in seconds. for the length and the width directions and for each face tested;
 - 1) the flame spread times(s) measured in accordance with 10.1.3 a) and c) of EN ISO 6941:2003;
 - 2) if six specimens are tested the mean from the results of each direction for all the specimens that burn to the respective marker thread and the number of values averaged for each direction;

NOTE 1 Do not report a mean of less than three values.

- i) the flame spread rate in mm/s for all specimens giving severance of the third marker thread;
- j) if six specimens are tested, the mean from the results of all the specimens of each direction;

NOTE 2 Do not report a mean of less than three values.

- k) the number of specimens that failed to ignite;
- l) the number of specimens which ignited but failed to burn the first marker thread;