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**Tekstilije - Gorljivost - Zavesa 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

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**Ta slovenski standard je istoveten z: EN 1102:1995**

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97.160	Tekstilije za dom. Perilo	Home textiles. Linen

**SIST EN 1102:1999****en**

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EUROPEAN STANDARD

EN 1102

NORME EUROPÉENNE

EUROPÄISCHE NORM

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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  
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Bestimmung der Flammenausbreitungseigenschaften  
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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
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## Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 248 "Textiles and textile products", of which the secretariat 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of an identical text or by endorsement, at the latest by May 1996, and conflicting national standards shall be withdrawn at the latest by May 1996.

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

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

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## 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

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 references, 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.

- EN 26330 Textiles - Domestic washing and drying procedures for textile testing (ISO 6330: 1984)
- EN ISO 6941: 1995 Textile fabrics - Burning behaviour - Measurement of flame spread properties of vertically oriented specimens (ISO 6941: 1984)
- ISO 3175 Textiles - Determination of dimensional change on dry cleaning in perchlorethylene - Machine method

## 3 Definitions

For the purpose of this standard, the following 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 6A ( $40 \pm 3$ )°C of EN 26630 and dried in accordance with method C of EN 26330;
- dry cleaning procedure in accordance with ISO 3175.

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

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.

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## 6 Test specimens

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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 specimens 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 ( $20 \pm 2$ )°C and ( $65 \pm 5$ ) % 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  $(45 \pm 5)$  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  $(68 \pm 6)$  g/m<sup>2</sup>, thickness 0,15 mm to 0,16 mm, content of alpha cellulose  $\geq 95$  %.

Note if the filter paper ignites or not.

### 8.4 Flame spread rate calculation

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

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

$t_1$  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 clause 8.9a) and c) of EN ISO 6941: 1995;
  - 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: 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: Do not report a mean of less than three values;