

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

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13772:2003 sisaldab Euroopa standardi EN 13772:2003 ingliskeelset teksti.	This Estonian standard EVS-EN 13772:2003 consists of the English text of the European standard EN 13772:2003.
Käesolev dokument on jõustatud 15.04.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 15.04.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

<b>Käsitlusala:</b> 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	<b>Scope:</b> 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
---	---

**ICS** 13.220.40, 59.080.30, 97.160

**Võtmesõnad:** messung, probe, probenahme, pruefanordnung, pruefgeraet, pruefung, pruefverfahren, spinnstoff, zuendquelle, test, textiles flaechegebilde, textilgewebe, textilien, textilpruefung, vertikal, widerstandsfahigkeit, vorhang, vorhangstoff

ICS 13.220.40; 59.080.30; 97.160

English version

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

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

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

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.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

## Contents

	page
Foreword.....	3
Introduction .....	4
1 Scope .....	5
2 Normative references .....	5
3 Term and definition.....	5
4 Principle .....	5
5 Health and safety of test operator.....	5
6 Apparatus and materials .....	6
6.1 General.....	6
6.2 Specimen holder .....	6
6.3 Electric radiator .....	6
6.4 Transformer .....	6
6.5 Copper disc calorimeter.....	6
6.6 Shield .....	7
6.7 Marker threads .....	7
6.8 Gas .....	7
6.9 Cotton cloth .....	7
6.10 Staple .....	7
6.11 Filter paper.....	7
6.12 Metal grid .....	7
6.13 Anemometer .....	7
7 Calibration .....	10
8 Sample and test specimen.....	10
8.1 Sample .....	10
8.2 Cleansing.....	10
8.3 Test specimen .....	10
8.3.1 General.....	10
8.3.2 Size .....	11
8.3.3 Number.....	11
8.3.4 Insertion of cotton cloth.....	11
9 Conditioning.....	11
10 Procedure .....	11
11 Precision .....	12
12 Test report .....	12
Annex A (informative) .....	13
Bibliography .....	14

## 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.