

**Kangasmaterjalid. Põlemisomadused. Leegi
levimisomaduste määramine vertikaalsetel proovidel**

Textile fabrics - Burning behaviour - Measurement of flame
spread properties of vertically oriented specimens

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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Võtmesõnad: kangad, katsed, katseseadmed, määramine, põletid, põlevuskatsed, tekstiilid, tule levik,

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ICS 13.220.40

Descriptors: Textiles, fabrics, tests, fire tests, determination, flame propagation, test equipment, burners

English version

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

Textiles - Comportement au feu - Détermination
des propriétés de flamme d'éprouvettes
orientées verticalement (ISO 6941:1984,
amendement 1:1992 inclus)

Textilien - Brennverhalten - Messung der
Flammenausbreitungseigenschaften vertikal
angeordneter Proben (ISO 6941:1984,
einschließlich Änderung 1:1992)

This European Standard was approved by CEN on 1995-01-02. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

This European Standard has been prepared by the 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of an identical text or by endorsement, at the latest by July 1995, and conflicting national standards shall be withdrawn at the latest by July 1995.

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, United Kingdom.

Endorsement Notice

The text of the International Standard ISO 6941:1984, including Amendment 1:1992 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in annex ZA (normative).

International Standard



6941

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Textile fabrics — Burning behaviour — Measurement of flame spread properties of vertically oriented specimens

Textiles — Comportement au feu — Détermination des propriétés de propagation de flamme d'éprouvettes orientées verticalement

First edition — 1984-08-15

UDC 677.064 : 620.1 : 677.017.56

Ref. No. ISO 6941-1984 (E)

Descriptors: textiles, fabrics, tests, fire tests, determination, flame propagation, test equipment, burners.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6941 was developed by Technical Committee ISO/TC 38, *Textiles*, and was circulated to the member bodies in July 1983.

It has been approved by the member bodies of the following countries:

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|---------------------|----------------|-----------------------|
| Australia | Ghana | Poland |
| Belgium | Hungary | Portugal |
| Brazil | India | Romania |
| Bulgaria | Iraq | South Africa, Rep. of |
| Canada | Ireland | Spain |
| China | Israel | Sri Lanka |
| Czechoslovakia | Italy | Sweden |
| Denmark | Jamaica | Switzerland |
| Egypt, Arab Rep. of | Japan | Tanzania |
| Finland | Kenya | Turkey |
| France | Korea, Rep. of | USSR |
| Germany, F.R. | New Zealand | Yugoslavia |

The member bodies of the following countries expressed disapproval of the document on technical grounds:

Netherlands
United Kingdom

Textile fabrics — Burning behaviour — Measurement of flame spread properties of vertically oriented specimens

1 Scope and field of application

This International Standard specifies a method for the measurement of flame spread properties of vertically oriented textile fabrics intended for apparel, curtains and draperies in the form of single- or multi-component (coated, quilted, multilayered, sandwich construction and similar combinations) fabrics.

The method should be used solely to assess the properties of materials or systems in response to heat flame under controlled laboratory conditions. The results may not apply to situations where there is restricted air supply or prolonged exposure to heat as in a conflagration.

2 References

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*.

ISO 4880/1, *Burning behaviour of textiles and textile products — Vocabulary — Part 1*.

3 Definitions

For the purpose of this International Standard, the following definitions apply (see ISO 4880/1):

3.1 afterflame: Persistence of flaming of a material, under specified test conditions, after the ignition source has been removed.

3.2 afterflame time: The length of time for which a material continues to flame, under specified test conditions, after the ignition source has been removed. (*Also called* Duration of flame.)

3.3 afterglow: Persistence of glowing of a material, under specified test conditions, after cessation of flaming or, if no flaming occurs, after removal of the ignition source.

3.4 afterglow time: The time for which a material continues to glow, under specified test conditions, after cessation of flaming, or after removal of the ignition source. (*Also called* Duration of afterglow.)

3.5 flame spread time: The time taken by a flame on a burning material to travel a specified distance under specified test conditions.

4 Principle

A defined ignition flame from a specified burner is applied for a defined period of time to textile specimens which are vertically oriented. The flame spread time is the time in seconds for a flame to travel between marker threads located at defined distances. Other properties relating to flame spread may also be observed, measured and recorded.

NOTE — Attention is drawn to annex B regarding quality of experimental techniques.

5 Health and safety of test operators

Burning of textiles may produce smoke and toxic gases which can affect the health of operators. The testing area should be cleared of smoke and fumes by suitable means.

6 Apparatus and materials

6.1 Construction of testing equipment

Some products of combustion are corrosive. The equipment should be constructed of material which will not be adversely affected by the fumes.

6.2 Location of test

A location in which the air movement is less than 0,2 m/s at the commencement of the test and is not further influenced by mechanical devices operating during the test is required. The volume of air surrounding the test location shall be such that the test is not affected by any reduction of oxygen concentration. Where an open-fronted cabinet is used for the test, provision shall be made to permit the specimen to be mounted at least 300 mm from any wall.

6.3 Template

A flat rigid template made of suitable material and of a size corresponding to the size of the specimen shall be used. Holes approximately 2 mm diameter are drilled in the template and positioned so that the distances between the centres of the holes correspond to the distances between the pins on the frames (see figure 1). The holes shall be located equidistant about the vertical centrelines of the template (see the note in 7.2).