



**International
Standard**

ISO 6940

**Textile fabrics — Burning behaviour
— Determination of ease of ignition
of vertically oriented specimens**

*Étoffes — Comportement au feu — Détermination de la facilité
d'allumage d'éprouvettes orientées verticalement*

**Third edition
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 38, *Textiles*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 248, *Textiles and textile products*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 6940:2004), which has been technically revised.

The main changes are as follows:

- [Figure 1](#) b) has been corrected with the proper angular dimension line and the shape of the tip of the gas jet;
- [Figure 3](#) a) and b) have been revised to show the test specimen clear;
- this revision aims to clarify without any structural changes.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This method is one of two closely related methods of test for the inflammability of textiles. It determines the ease of ignition as defined in ISO 4880 [1]. The other method measures flame spread time ISO 6941 [2].

The method specified in this document assesses the properties of textile fabrics in response to flame contact under controlled conditions. There is a possibility that results do not apply in situations where there is restricted air supply or exposure to large sources of intense heat.

The influence of seams on the behaviour of textile fabrics can be determined by this method, the seam being positioned within the test specimen to be subjected to the test flame. Whenever practicable, trimmings are tested as part of the textile fabric assembly on which they are, or will be, used.

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Textile fabrics — Burning behaviour — Determination of ease of ignition of vertically oriented specimens

1 Scope

This document specifies a method for the measurement of ease of ignition of vertically oriented textile fabrics and industrial products in the form of single or multi-component textile fabrics (coated, quilted, multilayered, sandwich constructions, and similar combinations), when subjected to a small, defined flame.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4880, *Burning behaviour of textiles and textile products — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4880 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

flame application time

time for which the *ignition* (3.3) flame is applied to the test specimen

3.2

afterflame time

length of time for which a material continues to flame under specified test conditions, after the *ignition* (3.3) source has been removed

Note 1 to entry: Afterflame time is measured to the nearest second and afterflame times of less than 1,0 s is recorded as zero.

3.3

ignition

initiation of combustion

3.4

sustained combustion

flaming of the test specimen which gives an *afterflame time* (3.2) of 5 s or more or which reaches the top or vertical edges in less than 5 s

4 Principle

A defined flame from a specified burner is applied to the surface or bottom edge of test specimens which are vertically oriented.