

Reaction to fire tests for products - Non-combustibility test (ISO 1182:2020)

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EUROPEAN STANDARD

**EN ISO 1182**

NORME EUROPÉENNE

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Supersedes EN ISO 1182:2010

English Version

## Reaction to fire tests for products - Non-combustibility test (ISO 1182:2020)

Essais de réaction au feu de produits - Essai  
d'incombustibilité (ISO 1182:2020)

Prüfungen zum Brandverhalten von Produkten -  
Nichtbrennbarkeitsprüfung (ISO 1182:2020)

This European Standard was approved by CEN on 1 May 2020.

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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.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## European foreword

This document (EN ISO 1182:2020) has been prepared by Technical Committee ISO/TC 92 "Fire safety" in collaboration with Technical Committee CEN/TC 127 "Fire safety in buildings" 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of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2021.

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 ISO 1182:2010.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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

## Endorsement notice

The text of ISO 1182:2020 has been approved by CEN as EN ISO 1182:2020 without any modification.

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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 documents 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](http://www.iso.org/directives)).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 92, *Fire safety*, Subcommittee SC 1, *Fire initiation and growth*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 127, *Fire safety in buildings*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This sixth edition cancels and replaces the fifth edition (ISO 1182:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

- a second furnace thermocouple has been introduced in [Subclauses 4.4, 7.2.2, 7.2.4](#) and [8.3, Clause 9](#) and [Figure 2](#);
- the calibration procedure of the furnace wall temperature has been adjusted;
- [Formulae \(16\)](#) and [\(17\)](#) have been aligned with the values in Table 3;
- in [Clause 5](#), the range of uncertainty in size of specimen has been reduced;
- [Annex D](#) has been corrected.

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](http://www.iso.org/members.html).

## Introduction

This fire test has been developed for use by those responsible for the selection of construction products which, whilst not completely inert, produce only a very limited amount of heat and flame when exposed to temperatures of approximately 750 °C.

The limitation of the field of application to testing homogeneous products and substantial components of non-homogeneous products was introduced because of problems in defining specifications for the specimens. The design of the specimen of non-homogeneous products strongly influences the test results, which is the reason non-homogeneous products cannot be tested to this document.

# Reaction to fire tests for products — Non-combustibility test

## 1 Scope

This document specifies a test method for determining the non-combustibility performance, under specified conditions, of homogeneous products and substantial components of non-homogeneous products.

Information on the precision of the test method is given in [Annex A](#).

## 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 13943, *Fire safety — Vocabulary*

IEC 60584-1, *Thermocouples — Part 1: EMF Specifications and tolerances*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13943 and the following apply.

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

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

### 3.1

#### **product**

material, element or component about which information is required

### 3.2

#### **material**

single basic substance or uniformly dispersed mixture of substances

EXAMPLE Metal, stone, timber, concrete, mineral wool with uniformly dispersed binder and polymers.

### 3.3

#### **loose fill material**

material without any physical shape

### 3.4

#### **homogeneous product**

product, consisting of a single material, having uniform density and composition throughout

### 3.5

#### **non-homogeneous product**

product, composed of more than one component, substantial or non-substantial, not having uniform density and composition throughout