

TOODETE TULETUNDLIKKUSE KATSED. ÜLEMISE  
PÕLEMISOOJUSE MÄÄRAMINE (KÜTTEVÄÄRTUS)

Reaction to fire tests for products - Determination of the  
gross heat of combustion (calorific value) (ISO  
1716:2018)

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 1716:2018 sisaldab Euroopa standardi EN ISO 1716:2018 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 1716:2018 consists of the English text of the European standard EN ISO 1716:2018.
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ICS 13.220.50, 91.100.01

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EUROPEAN STANDARD

EN ISO 1716

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2018

ICS 13.220.50; 91.100.01

Supersedes EN ISO 1716:2010

English Version

## Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716:2018)

Essais de réaction au feu de produits - Détermination du pouvoir calorifique supérieur (valeur calorifique) (ISO 1716:2018)

Prüfungen zum Brandverhalten von Produkten - Bestimmung der Verbrennungswärme (des Brennwertes) (ISO 1716:2018)

This European Standard was approved by CEN on 9 May 2018.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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

## European foreword

This document (EN ISO 1716:2018) 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of an identical text or by endorsement, at the latest by January 2019, and conflicting national standards shall be withdrawn at the latest by January 2019.

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 1716:2010.

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

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### Endorsement notice

The text of ISO 1716:2018 has been approved by CEN as EN ISO 1716:2018 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 on 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 the following URL: [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*.

This fourth edition cancels and replaces the third edition (ISO 1716:2010), which has been technically revised.

# Reaction to fire tests for products — Determination of the gross heat of combustion (calorific value)

**WARNING** — The attention of all persons concerned with managing and carrying out this test is drawn to the fact that fire testing may be hazardous and that there is a possibility that toxic and/or harmful gases may be evolved during the test. Operational hazards may also arise during the testing of specimens, such as the possibility of an explosion, and during the disposal of test residues.

**WARNING** — An assessment of all the potential hazards and risks to health should be made and safety precautions should be identified and provided. Written safety instructions should be issued. Appropriate training should be given to relevant personnel. Laboratory personnel should ensure that they follow written instructions at all times.

## 1 Scope

This document specifies a method for the determination of the gross heat of combustion ( $Q_{PCS}$ ) of products at constant volume in a bomb calorimeter.

This method is intended to be applied to solid products.

**NOTE** Liquids can be tested with similar equipment and using conditions described in ASTM D240[1], as described in IEC 61039[2] using ISO 1928[3] test equipment.

[Annex A](#) specifies the calculation of the net heat of combustion,  $Q_{PCI}$ , when required.

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

## 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 554, *Standard atmospheres for conditioning and/or testing — Specifications*

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 following terms and definitions 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 <https://www.electropedia.org/>

### 3.1

#### product

material, element or component about which information is required