

Dense shaped refractory products - Determination of cold compressive strength - Part 1: Referee test without packing (ISO 10059-1:2025)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN ISO 10059-1:2025 sisaldab Euroopa standardi EN ISO 10059-1:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 10.12.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN ISO 10059-1:2025 consists of the English text of the European standard EN ISO 10059-1:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 10.12.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN ISO 10059-1

NORME EUROPÉENNE

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English Version

## Dense shaped refractory products - Determination of cold compressive strength - Part 1: Referee test without packing (ISO 10059-1:2025)

Produits réfractaires façonnés denses - Détermination de la résistance à l'écrasement - Partie 1 : Méthode d'essai de référence sans intercalaire (ISO 10059-1:2025)

Dichte, geformte feuerfeste Erzeugnisse - Bestimmung der Kaltdruckfestigkeit - Teil 1: Schiedsprüfmethode ohne Ausgleichspappe (ISO 10059-1:2025)

This European Standard was approved by CEN on 7 December 2025.

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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

The text of ISO 10059-1:2025 has been prepared by Technical Committee ISO/TC 33 "Refractories" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10059-1:2025 by Technical Committee CEN/TC 187 "Refractory products and materials" 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 June 2026, and conflicting national standards shall be withdrawn at the latest by June 2026.

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 993-5:2018.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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, Türkiye and the United Kingdom.

## Endorsement notice

The text of ISO 10059-1:2025 has been approved by CEN as EN ISO 10059-1:2025 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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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 33, *Refractories*.

This third edition cancels and replaces the second edition (ISO 10059-1:1992), which has been technically revised.

The main changes are as follows:

- revised definitions;
- addition of the possibility to use cube shaped test piece;
- addition of an informative annex on precision and bias.

A list of all parts in the ISO 10059 series can be found on the ISO website.

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

The ISO 10059 series comprises two parts. This document (ISO 10059-1) specifies a referee method for determination of the cold compressive strength, which does not use any packing material. ISO 10059-2 will specify an alternative test where packing material and alternative test piece sizes are permitted.

The test method for shaped insulating products is given in ISO 8895.

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# Dense shaped refractory products — Determination of cold compressive strength —

## Part 1: Referee test without packing

### 1 Scope

This document specifies a method for determination of the cold compressive strength of dense shaped refractory products.

Shaped refractories are those which have fixed geometry and dimensions when delivered to the user. This document is accordingly applicable to standard shape refractory bricks, but also special shapes refractory products and pre-cast products.

### 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 13385-1, *Geometrical product specifications (GPS) — Dimensional measuring equipment — Part 1: Design and metrological characteristics of callipers*

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions 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 cold compressive strength

$\sigma_{CCS}$   
maximum load per unit area, applied under specified conditions at room temperature, that a refractory product will withstand before failure occurs

#### 3.2 dense shaped refractory product

product with specific dimensions, having a true porosity of less than 45 % by volume, when measured in accordance with ISO 5017