

**Spetsiaalne tehniline keraamika.
Monoliitkeraamika. Üldised ja
tekstuurilised omadused. Osa 2:
Tiheduse ja poorsuse määramine**

Advanced technical ceramics - Monolithic ceramics -
General and textural properties - Part 2:
Determination of density and porosity

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 623-2:2000 sisaldab Euroopa standardi EN 623-2:1993 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 623-2:2000 consists of the English text of the European standard EN 623-2:1993.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: See standardi EN 623 osa kirjeldab meetodeid spetsiaalse tehnilise keraamika puistetiheduse, poorideta näivtiheduse ja näivpoorsuse määramiseks.</p>	<p>Scope:</p>
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English version

Advanced technical ceramics

Monolithic ceramics

General and textural properties

Part 2: Determination of density and porosity

Céramiques techniques avancées;
céramiques monolithiques; propriétés
générales et structurales. Partie 2:
Détermination de la masse volumique et
de la porosité

Hochleistungskeramik; monolithische
Keramik; allgemeine und strukturelle
Eigenschaften. Teil 2: Bestimmung von
Dichte und Porosität

This European Standard was approved by CEN on 1993-08-30.

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.

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 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

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Foreword

This European Standard was prepared by CEN/TC 184 'Advanced technical ceramics', the Secretariat of which is held by BSI.

EN 623 'Advanced technical ceramics – Monolithic ceramics – General and textural properties' consists of four Parts:

Part 1: Determination of the presence of defects by dye penetration tests

Part 2: Determination of density and porosity

Part 3: Determination of grain size¹⁾

Part 4: Determination of surface roughness¹⁾

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by March 1994 at the latest.

In accordance with 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 and United Kingdom.

1 Scope

This Part of EN 623 describes methods for determination of the bulk density, apparent solid density, and apparent porosity of advanced technical ceramics.

Two methods are described and are designated as methods 1 and 2, as follows.

Method 1:

Determination of bulk density, apparent solid density and apparent porosity by the evacuation method.

NOTE 1: This method is not suitable for the determination of apparent porosity of less than 1%. A method for determining the presence of defects and surface porosity in this type of material is given in EN 623 Part 1.

NOTE 2: The method is also not suitable for materials which are known to have an average pore size greater than 200 μm .

Method 2:

Determination of bulk density only, by measurement of dimensions and mass.

NOTE 3: Neither of these test methods measures total porosity including open and closed pores. This parameter may be calculated from the test results of method 1 if the true density of pore-free material is known.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 623-1	Advanced technical ceramics; monolithic ceramics; general and textural properties. Part 1: Determination of the presence of defects by dye penetration tests
ENV 1006	Advanced technical ceramics; methods of testing monolithic ceramics; guidance on the sampling and selection of test pieces
EN 45001	General criteria for the operation of testing laboratories
ISO 758:1976	Liquid chemical products for industrial use; determination of density at 20 degrees C
ISO 3611:1978	Micrometer callipers for external measurement
ISO 4964:1984	Steel; hardness conversions
ISO 6906:1984	Vernier callipers reading to 0,02 mm

¹⁾ Parts 3 and 4 of this European Standard will be published as ENV.