

## **Advanced technical ceramics - Monolithic ceramics - Part 1: General practice for undertaking corrosion tests**

Advanced technical ceramics - Monolithic ceramics -  
Part 1: General practice for undertaking corrosion  
tests

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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| <p>Käesolev Eesti standard EVS-EN 12923-1:2007 sisaldab Euroopa standardi EN 12923-1:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 29.01.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 12923-1:2007 consists of the English text of the European standard EN 12923-1:2006.</p> <p>This document is endorsed on 29.01.2007 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><b>Käsitlusala:</b></p> <p>This part of EN 12923 specifies guidelines to be employed when undertaking corrosion tests on advanced technical ceramics. The mechanisms of chemical attack on advanced ceramics are widely varied and depend on the chemical and phase composition and the phase morphology of the material, as well as the corrosive conditions imposed. For any particular engineering application it is usually necessary to model expected conditions of use in order to obtain quantitative data on ability to withstand the proposed end-use conditions.</p> | <p><b>Scope:</b></p> <p>This part of EN 12923 specifies guidelines to be employed when undertaking corrosion tests on advanced technical ceramics. The mechanisms of chemical attack on advanced ceramics are widely varied and depend on the chemical and phase composition and the phase morphology of the material, as well as the corrosive conditions imposed. For any particular engineering application it is usually necessary to model expected conditions of use in order to obtain quantitative data on ability to withstand the proposed end-use conditions.</p> |
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English Version

**Advanced technical ceramics - Monolithic ceramics - Part 1:  
General practice for undertaking corrosion tests**

Céramiques techniques avancées - Céramiques  
monolithiques - Partie 1: Pratique générale destinée aux  
essais de corrosion

Hochleistungskeramik - Monolithische Keramik - Teil 1:  
Allgemeines zur Durchführung von Korrosionsprüfungen

This European Standard was approved by CEN on 25 November 2006.

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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## Foreword

This document (EN 12923-1:2006) has been prepared by Technical Committee CEN/TC 184 “Advanced technical ceramics”, 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 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

This document supersedes ENV 12923-1:1997.

EN 12923 *Advanced technical ceramics — Monolithic ceramics* consists of two parts:

Part 1: *General practice for undertaking corrosion tests*

Part 2: *Oxidation test*

At the time of publication of this edition of Part 1, Part 2 was a European Prestandard.

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

## 1 Scope

This part of EN 12923 specifies guidelines to be employed when undertaking corrosion tests on advanced technical ceramics. The mechanisms of chemical attack on advanced ceramics are widely varied and depend on the chemical and phase composition and the phase morphology of the material, as well as the corrosive conditions imposed. For any particular engineering application it is usually necessary to model expected conditions of use in order to obtain quantitative data on the ability to withstand the proposed end-use conditions.

This European Standard is not restricted to specific material types, nor does it prescribe particular test conditions or a test duration. The actual testing requirements might be very specific, for example, in order to investigate the suitability of a range of materials for a given application in which certain specified conditions occur. This European Standard provides recommended methods for undertaking the assessment of the effect of corrosion and provides guidance on practical issues related to undertaking the tests.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

EN 623-1, *Advanced technical ceramics — Monolithic ceramics — General and textural properties — Part 1: Determination of the presence of defects by dye penetration*

EN 623-4, *Advanced technical ceramics — Monolithic ceramics — General and textural properties — Part 4: Determination of surface roughness*

EN 843-1, *Advanced technical ceramics — Mechanical properties of monolithic ceramics at room temperature — Part 1: Determination of flexural strength*

EN 843-4, *Advanced technical ceramics — Mechanical properties monolithic ceramics at room temperature — Part 4: Vickers, Knoop and Rockwell superficial hardness*

ENV 1006, *Advanced technical ceramics — Monolithic ceramics — Guidance on the selection of test pieces for the evaluation of properties*

EN 60584-1, *Thermocouples — Part 1: Reference tables*

EN 60584-2, *Thermocouples — Part 2: Tolerances*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2005)*

ISO 3611, *Micrometer callipers for external measurement*

ISO 6906, *Vernier callipers reading to 0,02 mm*