INTERNATIONAL STANDARD

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# Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for spherical indentation of porous ceramics

*Céramiques techniques — Méthode d'essai d'indentation des céramiques poreuses avec un indenteur sphérique*

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# Foreword

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 206, *Fine ceramics*.

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# Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for spherical indentation of porous ceramics

## 1 Scope

This International Standard describes the test methods for determining spherical indentation strength of porous ceramics, such as those employed for filters and catalyst carriers, that are carried out in air at room temperature.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 463, *Geometrical Product Specifications (GPS) — Dimensional measuring equipment — Design and metrological characteristics of mechanical dial gauges*

ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Non-alloy steels for quenching and tempering*

ISO 683-3, *Heat-treatable steels, alloy steels and free-cutting steels — Part 3: Case-hardening steels*

ISO 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 3290-1, *Rolling bearings — Balls — Part 1: Steel balls*

ISO 3611, *Geometrical product specifications (GPS) — Dimensional measuring equipment: Micrometers for external measurements — Design and metrological characteristics*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

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

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

**3.1**
**porous ceramics**
ceramics with porosity of 30 % to 60 %, and pore diameter of 1 μm to 100 μm, for applications such as filters, catalyst carriers, humidity sensors, or molecular sieves, excluding structured honeycomb cellular channels

**3.2**
**spherical indenter**
sphere through which a compressive load is applied to the specimen

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