

Dentistry - Compatibility testing - Part 1: Metal-ceramic systems (ISO 9693-1:2012)

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NATIONAL FOREWORD

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English Version

**Dentistry - Compatibility testing - Part 1: Metal-ceramic systems
(ISO 9693-1:2012)**

Médecine bucco-dentaire - Essais de compatibilité - Partie
1: Systèmes métallo-céramiques (ISO 9693-1:2012)

Zahnheilkunde - Verbundprüfung - Teil 1: Metall-
Keramiksysteme (ISO 9693-1:2012)

This European Standard was approved by CEN on 14 February 2012.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 9693-1:2012) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 "Dentistry" the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by August 2012, and conflicting national standards shall be withdrawn at the latest by August 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9693:2000.

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Endorsement notice

The text of ISO 9693-1:2012 has been approved by CEN as a EN ISO 9693-1:2012 without any modification.

Introduction

Dental metallic materials and ceramics are suitable for use in the fabrication of metal-ceramic dental restorations.

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Dentistry — Compatibility testing —

Part 1: Metal-ceramic systems

1 Scope

This part of ISO 9693 specifies test methods for determining the compatibility of metallic and ceramic materials used for dental restorations by testing the composite structure.

The requirements given in this part of ISO 9693 are applicable to metallic materials and ceramics when used in combination, and are not applicable to either metallic materials or ceramics when used alone.

NOTE Requirements for metallic materials are given in ISO 22674; requirements for ceramic materials are given in ISO 6872.

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.

ISO 1942, *Dentistry — Vocabulary*

ISO 6872:2008, *Dentistry — Ceramic materials*

ISO 22674:2006, *Dentistry — Metallic materials for fixed and removable restorations and appliances*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 6872 and ISO 22674 apply.

4 Requirements

4.1 Biocompatibility

Specific qualitative and quantitative test methods for demonstrating freedom from unacceptable biological risks are not included in this part of ISO 9693, but it is recommended that, for the assessment of such biological risks, reference be made to ISO 10993-1 and ISO 7405.

4.2 Properties of metal-ceramic system

The debonding/crack-initiation strength of the metallic material and at least one specified (named) ceramic present shall be greater than 25 MPa. The debonding/crack-initiation strength of the ceramic and at least one specified (named) metallic material present shall be greater than 25 MPa.

Testing shall be carried out in accordance with 6.4.