



Revised American National Standard/
American Dental Association
Specification No. 69

Dental Ceramic

Identical adoption of ISO 6872:2008, *Dentistry-Ceramic Materials*.

ADA American
Dental
Association®
Council on
Scientific Affairs

2010

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Reaffirmed: October 26, 2015

REVISED AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 69 FOR DENTAL CERAMIC

The Council on Scientific Affairs of the American Dental Association has approved American Dental Association Specification No. 69 for Dental Ceramic. This and other specifications for dental materials, instruments and equipment are being formulated by working groups of the ADA Standards Committee on Dental Products (formerly Accredited Standards Committee MD156 for Dental Materials, Instruments and Equipment). The Committee has representation from all interests in the United States in the standardization of materials, instruments and equipment in dentistry. The Council has adopted the specifications, showing professional recognition of their usefulness in dentistry, and has forwarded them to the American National Standards Institute with a recommendation that the specifications be approved as American National Standards. The American National Standards Institute granted approval of ADA Specification No. 69 as an American National Standard on December 6, 2010.

The ADA Standards Committee on Dental Products thanks the members of Working Group 2.20 and the organizations with which they were affiliated at the time the specification was developed:

Robert Kelly (chairman), UCONN Health Sciences Center, Farmington, CT;

Christopher Chu, Dentsply Ceramco, Burlington, NJ;

Lawrence Gettleman, University of Louisville, KY;

Clyde Ingersoll, CEI Enterprises, Ltd., Tonawanda, NY;

Craig Jolicoeur, The Argen Corporation, San Diego, CA; and

William McLees, National Association of Dental Laboratories, Kent, WA.

REVISED AMERICAN NATIONAL STANDARD/AMERICAN DENTAL ASSOCIATION SPECIFICATION NO. 69 FOR DENTAL CERAMIC

FOREWORD

(This Foreword does not form a part of Revised ANSI/ADA Specification No. 69 for Dental Ceramic).

The previous edition of this specification, ANSI/ADA Specification No. 69-1999, was an adoption of ISO 6872:1995, Dental Ceramic. This specification is an identical adoption of ISO 6872:2008, Dentistry – Ceramic Materials, which is a revision of ISO 6872:1995. ADA SCDP Working Group No. 2.20 on Porcelain and Metal-Ceramic systems examined the international standard and found it acceptable for adoption as revised ANSI/ADA Specification No. 69. It cancels and replaces ANSI/ADA Specification No. 69-1999.

Specific qualitative and quantitative requirements for freedom from biological hazard are not included in this specification, but it is recommended that, in assessing possible biological or toxicological hazards, reference be made to ANSI/ADA Specification No. 41, ISO 10993-1 and ISO 7405.

Addendum to the Foreword for this Reaffirmation:

In 2012, the ADA Standards Committee on Dental Products approved a change in the terminology used for standards. ADA standards will no longer utilize the term Specification; standards will now be named as ADA Standards.

With this notice, this ADA Specification is now termed an ADA Standard. Where the term "specification" is used, it should be considered as "standard." It will be re-named as an ADA Standard in its next revision.

Reaffirmed: October 26, 2015

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1 SCOPE

This standard specifies the requirements and the corresponding test methods for dental ceramic materials for fixed all-ceramic and metal-ceramic restorations and prostheses.

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 3696, *Water for analytical laboratory use — Specification and test methods*

(ISO standards for dentistry are available from the American Dental Association, Department of Standards, 211 E. Chicago Ave., Chicago, IL 60611 or www.adacatalog.org. ISO standards are available from the American National Standards Institute, 25 W. 43rd St., New York, NY 10036 or www.ansi.org).

3 TERMS AND DEFINITIONS

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

3.1 Material

- 3.1.1 **Addition ceramic** – dental ceramic material that is fired at a reduced temperature and is normally applied to restore contact points on a dental restoration or prosthesis.
- 3.1.2 **Dental ceramic** – inorganic, non-metallic material that is specifically formulated for use, when processed according to manufacturer's instructions, to form the whole or part of a dental restoration or prosthesis
- 3.1.3 **Dental porcelain** – predominantly glassy dental ceramic material used mainly for aesthetics in a dental restoration or prosthesis
- 3.1.4 **Dentine ceramic** – dental ceramic material used to form the overall shape and basic color of a dental restoration or prosthesis, simulating the natural tooth dentine
- 3.1.5 **Enamel ceramic** – dental ceramic material used to overlay either partially or wholly the dentine ceramic and also to form the more translucent incisal third of a dental restoration or prosthesis, simulating the natural tooth enamel
- 3.1.6 **Flame-sprayed dental ceramic** – dental ceramic core or substructure layer formed via the technique of flame spraying
- 3.1.7 **Glass-ceramic (dental)** – dental ceramic material formed by the action of heat treatment on a glass, in order to cause initiation and growth of a wholly or predominantly crystalline microstructure
- 3.1.8 **Glass-infiltrated dental ceramic** – dental ceramic core or substructure layer, which is porous and is subsequently densified by the infiltration of specialized glass at elevated temperature