

STANDARDS EXECUTIVE SUMMARY FOR ADA MEMBERS

ANSI/ADA STANDARD NO. 69:2017 DENTAL CERAMIC

WHAT IS ANSI/ADA STANDARD NO. 69 ABOUT?

This standard gives requirements and test methods for dental ceramic materials used in all-ceramic and metal-ceramic restorations and prostheses.

WHAT ARE THE REQUIREMENTS I SHOULD KNOW ABOUT FOR DENTAL CERAMIC?

Dental ceramics are divided into five classes according to their intended clinical use. This standard sets requirements for the two major properties, flexural strength and chemical solubility, for each class as shown in the following table:

Class	Recommended clinical indications	Mechanical and chemical properties	
		Flexural strength [MPa] minimum value for mean	Chemical solubility [µg/cm ²]
1	a) Monolithic ceramic for single-unit anterior prostheses, veneers, inlays, or onlays adhesively cemented.	50	<100
	b) Ceramic for coverage of a metal framework or a ceramic substructure.	50	<100
2	a) Monolithic ceramic for single-unit anterior or posterior prostheses adhesively cemented.	100	<100
	b) Partially or fully covered substructure ceramic for single-unit anterior or posterior prostheses adhesively cemented.	100	<2,000
3	a) Monolithic ceramic for single-unit anterior or posterior prostheses and for three-unit prostheses not involving molar restoration adhesively or non-adhesively cemented.	300	<100
	b) Partially or fully covered substructure for single-unit anterior or posterior prostheses and for three-unit prostheses not involving molar restoration adhesively or non-adhesively cemented.	300	<2,000
4	a) Monolithic ceramic for three-unit prostheses involving molar restoration.	500	<100
	b) Partially or fully covered substructure for three-unit prostheses involving molar restoration.	500	<2,000
5	Monolithic ceramic for prostheses involving partially or fully covered substructure for four or more units or fully covered substructure for prostheses involving four or more units.	800	<100

WHAT'S THE BOTTOM LINE?

ANSI/ADA Standard No. 69 sets requirements and provides recommended minimum property values for specific restorations to ensure dental restorative and prosthetic devices made from ceramic materials have the necessary mechanical and physical properties to make them fit for patient use.

WHAT ARE ANSI/ADA STANDARDS?

ANSI/ADA Standards are technical documents developed through the expertise of a diverse group of volunteer stakeholders including dental professionals/consumers, scientific researchers, industry innovators and government. They are the safety net you never knew was there, setting requirements that ensure your needs are met for safe and reliable products and making sure you have the information you need to make informed purchasing decisions. The standards process works for you, setting the stage so that the dental products, processes, and systems you rely on every day work the way you need them to and operate effectively together. Dental standards give you greater purchasing power, more choices and lower costs by ensuring technologies work across manufacturers and users.