

SINTERING ARGENZ ANTERIOR

Stage	Program	Rate/Minute	Temperature	Time (Minutes)
1	Heating Ramp	7°C/Minute	900°C	125 Minutes
2	Heating Ramp	10°C/Minute	1450°C	55 Minutes
3	Heat Soak		1450°C	120 Minutes
4	Cooling Ramp	6°C/Minute	1000°C	75 Minutes
5	Cooling Ramp	Natural Cool	Natural Cool	134 Minutes

*After this controlled cooling segment, the framework can cool naturally

ADJUSTING ARGENZ

- Only use burs specifically designed for adjusting Zirconia. Always ensure that Zirconia is wet during the grinding process. A high-speed wet hand piece, at low speed, is recommended during the adjusting process in order to keep heat to a minimum.
- Avoid grinding the basal grooves and tooth connections.
- If possible, smooth rough or sharp edges.
- Do not sandblast.

ARGENZ ANTERIOR MATERIAL PROPERTIES

STRENGTH

Flexural Bending Strength – ArgenZ Anterior
>765 MPa mean value

Density
≥ 6.00 g/cm³

COMPOSITION

ZrO ₂ + HfO ₂ + Y ₂ O ₃	>99 wt%
Y ₂ O ₃	8.5 - 10 wt%
HfO ₂	<5 wt%
Al ₂ O ₃	<0.1 wt%
Fe ₂ O ₃	<0.1 wt%

Type/class Type II/Class 4
ISO 6872:2015

THERMAL EXPANSION COEFFICIENT

25-500° C = 10µm/m-°C

HAZARDS IDENTIFICATION - EMERGENCY OVERVIEW

Specific Physical Form:
Solid Block or Slab

Odor, Color, Grade:
White odorless block

General Physical Form:
Solid

Immediate health, physical, and environmental hazards:
No immediate health, physical, or environmental hazards are anticipated.

Eye Contact:
Mechanical eye irritation:
Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Skin Contact:
Mechanical Skin irritation:
Signs/symptoms may include abrasion, redness, pain, and itching.

Inhalation:
During grinding, scraping or sanding, inhalation of particles may occur, resulting in upper respiratory tract irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:
No health effects are expected.

Please refer to the complete MSDS sheet provided with your order.

ArgenZ Technical Support

For further questions or technical support, please contact Argen's Technical Support staff at (800) 255-5095

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MADE IN THE USA

CE 0086



ARGENZ ANTERIOR DISC

Super Translucent Zirconia

The Argen Corporation

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EC REP

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ARGEN

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INSTRUCTIONS FOR USE

ArgenZ Anterior (super translucent) dental zirconia is indicated for the production of full contour restorations. The following instructions provide general guidelines for handling, designing, milling, coloring, sintering and adjusting of ArgenZ material and should be followed very carefully to avoid any loss of aesthetics, fit, durability or overall quality.

INDICATIONS FOR USE

ArgenZ Anterior (super translucent) zirconia can be used for the production of full contour single unit anterior and posterior restorations, and 3-unit anterior bridges.

HANDLING ARGENZ

Inspect each shipment for damage and do not use damaged discs for the production of dental restorations. Store ArgenZ in a cool, dry, temperature-stable environment (between 5°C and 50°C) in the original packaging.

DESIGNING ARGENZ

Noncompliance with these guidelines could result in an unfit or failed restoration.

Design Option	Design Guidance
Drill Compensation	Drill compensation must be activated for all substructures milled from a solid structure.
Cement Gap	The distance where the coping intersects the die at the margin area. Use this setting to control margin fit.
Extra cement Gap	The distance between the coping walls and the die. Use this setting to control internal fit.
Distance to Margin Line	The distance from the margin outer line to the start of the interior wall of the coping.
Smooth Distance	The distance from the margin line to the margin engagement point. should be set at 0.20mm.
Drill Radius	The drill radius is the size of the smallest end mill used to mill the pattern.
Drill Compensation Offset	The distance from the margin line to the area affected by drill compensation. should be a minimum of 0.5mm.
Margin Line Offset	The effective thickness of the margin line and should not be less than 0.16mm. Thinner margin lines will result in a higher failure rate.
Offset Angle #1	The offset angle should not be less than 65°.
Extension Offset	The extension offset should not be less than 0.01mm.
Wall Thickness	A nominal wall thickness of 0.5mm will ensure a consistently quality product. Reducing this value could result in fractures or holes in the framework.
Bridge Connectors	Recommended Anterior restorations: 9mm ² minimum.

MILLING ARGENZ

Pre-sintered (or “green”) zirconia material has an inherent shrinkage rate associated with each production lot. This shrink rate, usually formatted as 1.XXXX, can be found on the side of the actual disc. This number **MUST** be input into the milling preparation software to ensure the accuracy of the eventual restoration.

When milling ArgenZ, always follow these general guidelines:

- Only use sharp end mills with carbide or diamond coating.
- Do not use any restoration that has chips and/or cracks
Remove the units from the disc using a handpiece with a diamond-coated burr.
- Smooth the support areas with a medium-grit rubber polishing wheel.
- Remove any residual zirconia dust with an art brush.
- If a wet mill is used make sure all the zirconia is completely dry before sintering. Air dry for at least 15 minutes prior to sintering. Damp zirconia will crack if placed in the sintering oven.

COLORING ARGENZ

ArgenZ Anterior is compatible with all major dental zirconia coloring systems.

