

Aconia 3D Multilayer Technology

- Excellent esthetic properties with integrated shade and seamless gradient
- Efficient, economical processing without staining procedure
- Simplify Zirconia material selection through wide indication application options

4 PARTS STRUCTURE



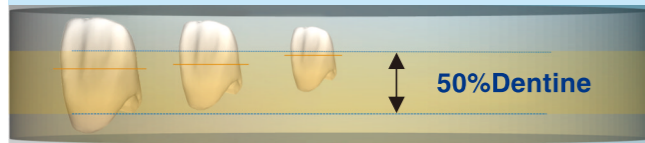
- Incisal part** 20%
- Transition part** 20%
- Body part** 50%
- Cervical part** 10%

What is 3D Multilayer?

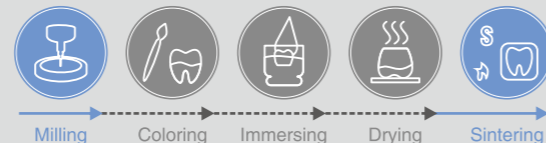
- Gradient chroma:**
Increasing chroma from incisal to cervical
- Gradient translucency:**
Increasing translucency from cervical to incisal
- Gradient flexural strength:**
Increasing flexural strength from incisal to cervical

3D Multilayer	Translucency	Flexural strength
Aconia TTML	49% ↔ 46%	600MPa ↔ 900MPa
Aconia SHTML	46% ↔ 43%	900MPa ↔ 1100MPa
Aconia STML	45% ↔ 42%	1100MPa ↔ 1200MPa

Aconia 3D Nesting Technology - Increased body part- 50%



Aconia 3D High Efficiency - Processing Procedure



3D Multilayer	Frequently-used Heights				
	14mm	16mm	18mm	20mm	22mm
20% Incisal part	2.8 mm	3.2 mm	3.6 mm	4 mm	4.4 mm
20% Transition part	2.8 mm	3.2 mm	3.6 mm	4 mm	4.4 mm
50% Body part	7 mm	8 mm	9 mm	10 mm	11 mm
10% Cervical part	1.4 mm	1.6 mm	1.8 mm	2.0mm	2.2mm

Multilayer — TT-ML

Create the best smile with highest esthetics



- Most natural appearance
- Perfect option for anterior esthetic restoration
- Fast and easy processing
- Creatively maximized efficiency and esthetics

Technical Data

Flexural Strength (3-point)	600-900 Mpa
Translucency	46-49%
Vickers-hardness HV10	1300±50
Density	>3.00 (g/cm ³)
Sintered Density	>6.02 (g/cm ³)
Chemical Solubility	<50 (µg/cm ³)
Radioactivity	<0.1 (Bq·g ⁻¹)
Fracture toughness	>3 (Mpa·m ^{1/2})
CTE(span25°C~500°C)	(10.5±0.5) *10 ⁻⁶ K ⁻¹

Indication



Multilayer — SHT-ML

Create the best smile with highest flexibility

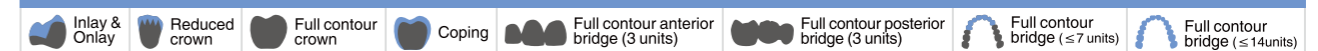


- All-in-one & One-for-all
- Seamless gradient in translucency, strength and shade
- Fast and easy processing
- Revolutionary combination of strength and translucency

Technical Data

Flexural Strength (3-point)	900-1100 Mpa
Translucency	43-46%
Vickers-hardness HV10	1300±50
Density	>3.00 (g/cm ³)
Sintered Density	>6.02 (g/cm ³)
Chemical Solubility	<50 (µg/cm ³)
Radioactivity	<0.1 (Bq·g ⁻¹)
Fracture toughness	>5 (Mpa·m ^{1/2})
CTE(span25°C~500°C)	(10.5±0.5) *10 ⁻⁶ K ⁻¹

Indication



Multilayer — ST-ML

Create the best smile with highest strength



- Perfect integration: strength+aesthetics
- 3D seamless gradient: Shade+Strength+Translucency
- Efficient processing without coloring procedure needed

Technical Data

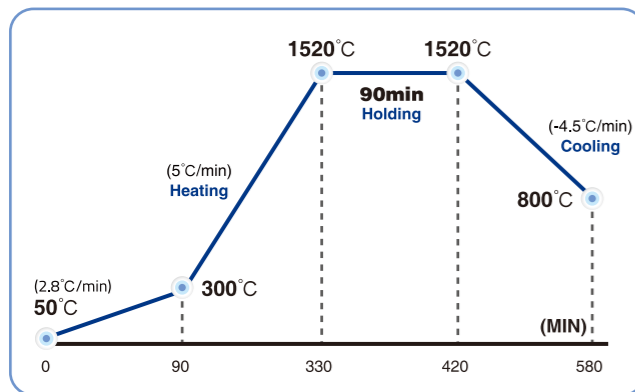
Flexural Strength (3-point)	1000-1200 Mpa
Translucency	42-45%
Vickers-hardness HV10	1300±50
Density	>3.00 (g/cm ³)
Sintered Density	>6.02 (g/cm ³)
Chemical Solubility	<50 (µg/cm ³)
Radioactivity	<0.1 (Bq·g ⁻¹)
Fracture toughness	>5.5 (Mpa·m ^{1/2})
CTE(span25°C~500°C)	(10.5±0.5) *10 ⁻⁶ K ⁻¹

Indication



Sintering

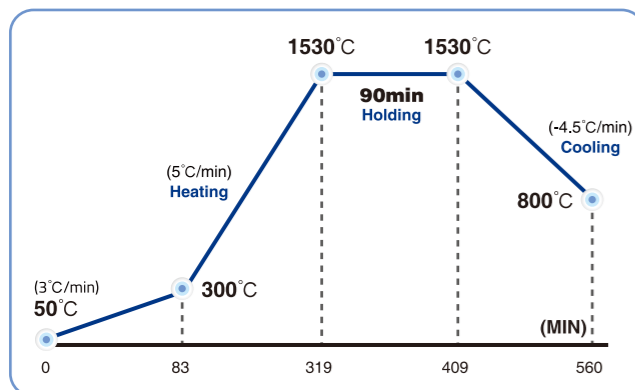
Aconia SHT-ML ST-ML Sintering Parameters



Step	Initial Temp	Rate	Final Temp	Time
1	50°C	2.8°C/min	300°C	90min
2	300°C	5°C/min	1520°C	240min
3	1520°C	Holding	1520°C	90min
4	1520°C	-4.5°C/min	800°C	160min
5	800°C		Natural cooling	

Applied to single unit and bridges under 7 units(1-7units)

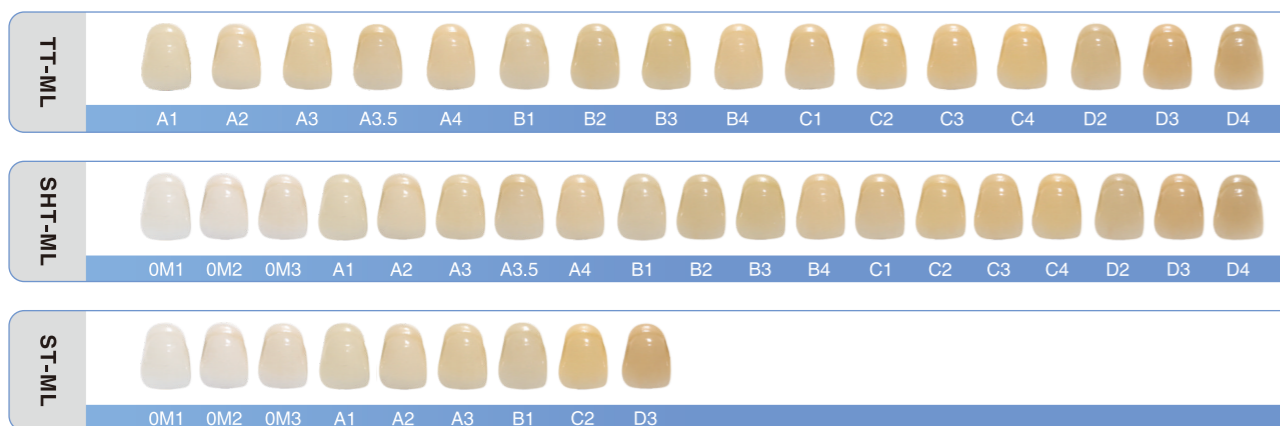
Aconia TT-ML Sintering Parameters



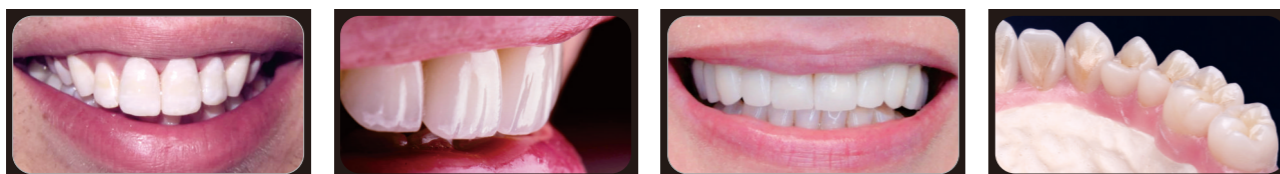
Step	Initial Temp	Rate	Final Temp	Time
1	50°C	3°C/min	300°C	83min
2	300°C	5°C/min	1530°C	236min
3	1530°C	Holding	1530°C	90min
4	1530°C	-4.5°C/min	800°C	151min
5	800°C		Natural cooling	

Applied to single unit and bridges under 3 units(1-3units)

Wide Shade Selection



Aconia Multilayer Gallery



Aconia 3D MULTI

Seamless Gradient, Seamless Care



- 01 3D - Shade+Strength+Translucency
- 02 CAM - Nesting friendly
- 03 Transition - No layer lines

