

sagemax



CAD/CAM PRODUCTS



FOR
CAD/CAM MOVERS



NexxZr Zirconia

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NexxZr Tools

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Sagemax Bioceramics, Inc. is one of the world's leading dental manufacturers and suppliers of zirconia. Founded in 2006, the company is a rapidly growing provider of esthetic zirconia products for leading dental CAD / CAM systems. The development of materials and production takes place in Federal Way, Washington. The Sagemax development team has over 15 years of experience in preparing and processing zirconia powders. This experience is reflected in the unique manufacturing and coloring process. The result is zirconia restorations with high esthetics.



sagemax

NEXZr[®].S

HIGH STRENGTH DENTAL ZIRCONIA

Made in USA

REF W-31003

White

16 mm Thickness
ø 98.5 mm

W-98-16-NS-WT98-SD

CE 0123

**STRONG.
WHITE.**

NexxZr S – strong. white.

NexxZr S is a dental zirconia (Y-TZP ZrO₂) with a very high flexural strength of 1370MPa. The simultaneously high opacity value is ideal for discolored stumps or hybrid restorations on titanium bases.

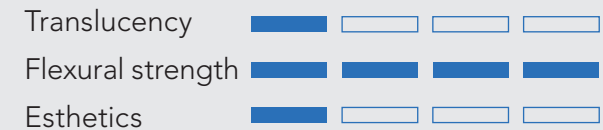
NexxZr S can be used as a framework material with brush or dipping infiltration. All-ceramic veneering is possible with the common all-ceramic systems (see CET value).

NexxZr S - a strong zirconia for fixed and implant-supported prosthetics.

**High opacity
for discolored
stumps**

**High processing comfort
easy to mill**

**Flexibility in processing
for fixed and implant-
supported prosthetics**



Single-tooth
restorations



3-unit / multi-
unit bridges



Implant-supported
restorations



Anatomically reduced
crowns and bridges



TRANSLUCENT. 20 COLORS.



NexxZr T Coloring Liquids
16 A-D Colors / 5 Effect Colors

NexxZr T – translucent. 20 colors.

NexxZr T is a dental zirconia (Y-TZP ZrO₂) for monolithic restorations from single-tooth to multi-unit bridge restoration. It impresses with its perfect balance between translucency and strength (1270MPa) for the production of esthetic all-ceramic restorations. The soft material before sintering ensures an effortless manufacturing process.

NexxZr T white can be customized individually by brush or dipping infiltration (NexxZr T Coloring Liquids) or processed as a preshaded variant (16 A-D shades, 3 Bleach shades). All-ceramic veneering is possible with the common all-ceramic systems (see CET value).

NexxZr T - a translucent zirconia for individual esthetics.



Proven Esthetics
Dental
Advisor
Award



Comprehensive color selection
20 colors
(16 A-D, 3 Bleach, white)

Maximum
variety of indications

Translucency				
Flexural strength				
Esthetics				



Single-tooth
restorations



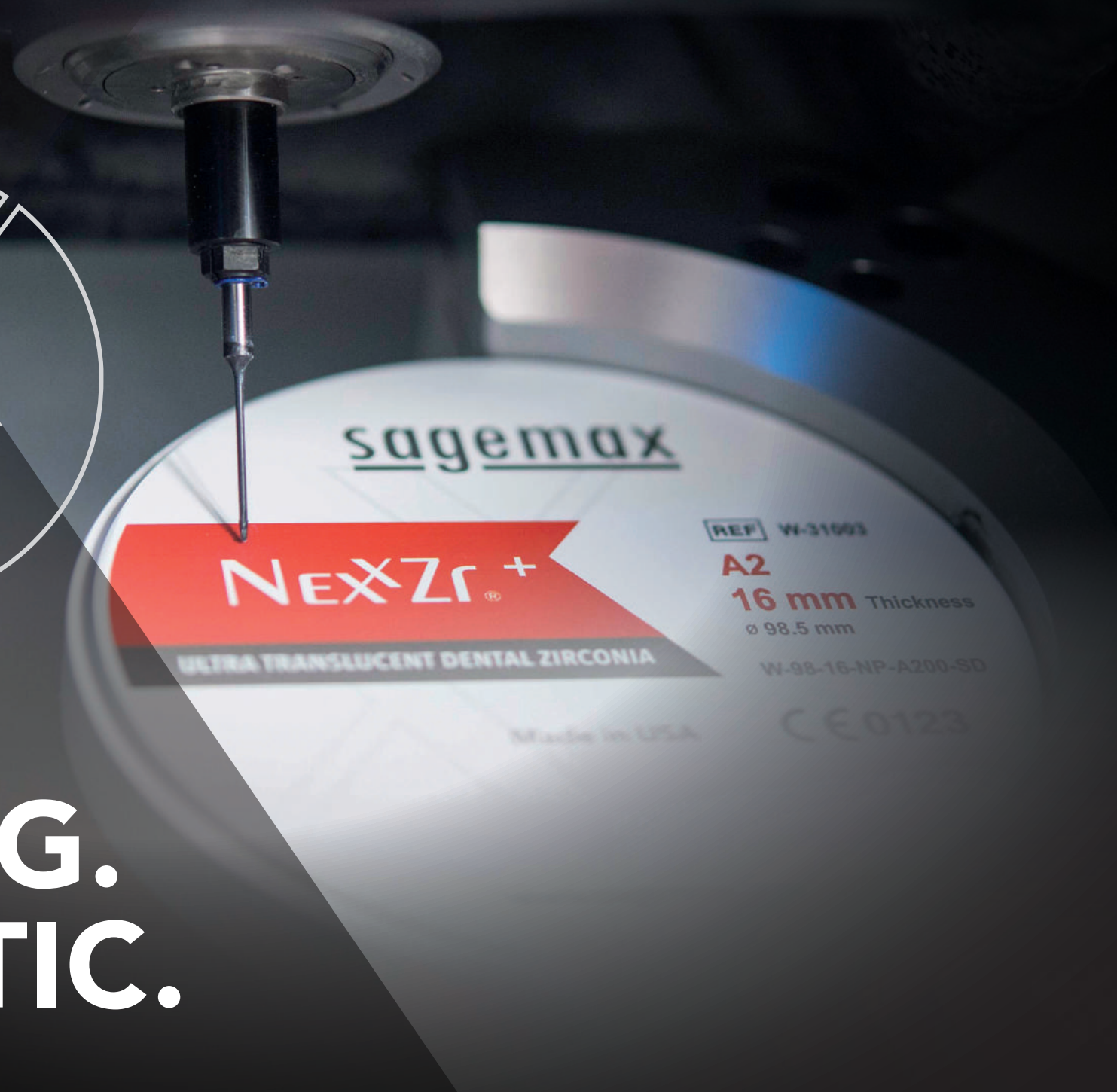
3-unit / multi-
unit bridges



Implant-supported
restorations



Anatomically reduced
crowns and bridges



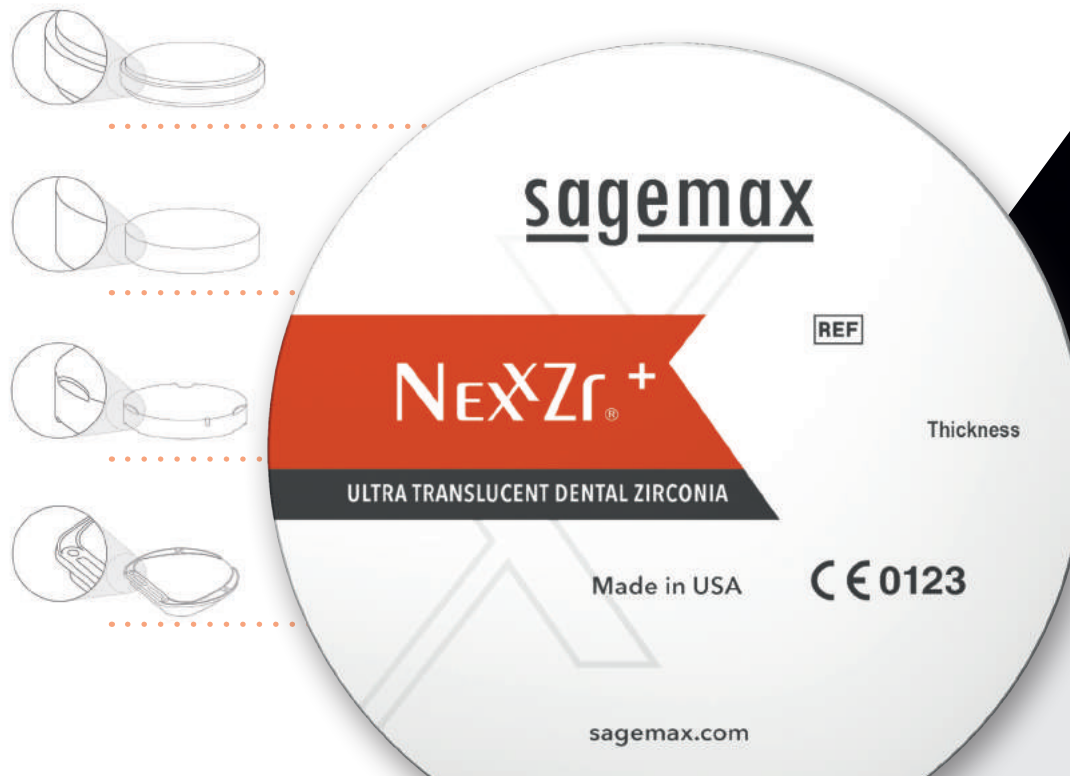
**STRONG.
ESTHETIC.**

NexxZr⁺ – strong. esthetic.

NexxZr⁺ is a dental zirconia (Y-TZP ZrO₂) for highly translucent, monolithic restorations. NexxZr⁺ white offers with 1000MPa (preshaded 880MPa) an outstanding high flexural strength combined with high translucency.

The soft material before sintering ensures an effortless manufacturing process. NexxZr⁺ white can be customized individually by brush or dipping infiltration (NexxZr⁺ Coloring Liquids) or processed as a preshaded version (6 A-D shades). All-ceramic veneering is possible with the common all-ceramic systems (see CET value).

NexxZr⁺ - a high translucent zirconia for perfect esthetics.



Outstanding esthetics
translucent and
high-strength

Extensive color selection
7 colors (white, 6 A-D)

Wide range of indications
from single-tooth restoration
to multi-unit bridge

Translucency	<div></div>	<div></div>	<div></div>	<div></div>
Flexural strength	<div></div>	<div></div>	<div></div>	<div></div>
Esthetics	<div></div>	<div></div>	<div></div>	<div></div>



Single-tooth
restorations



3-unit / multi-
unit bridges*



Implant-supported
restorations



Anatomically reduced
crowns and bridges

* preshaded: maximum 3-unit



**ESTHETIC.
MULTILAYER.**



NexxZr⁺ Multi – esthetic.multilayer.

NexxZr⁺ Multi is a polychromatic dental zirconia (Y-TZP ZrO₂) for the production of esthetic, monolithic restorations with an integrated color grading.

The integrated color gradient and 880MPa flexural strength enable the efficient production of single-tooth restorations and bridges up to 3 units in the anterior and posterior region. The application of all-ceramic glaze paste can be done with the common all-ceramic systems (see CTE value).

NexxZr⁺ Multi - high translucent multilayer zirconia.

Efficiency
integrated color gradient

Esthetics
highly translucent and
polychromatic

Color selection
7 colors incl. gradient

Translucency				
Flexural strength				
Esthetics				



Single-tooth
restorations



3-unit / multi-
unit bridges



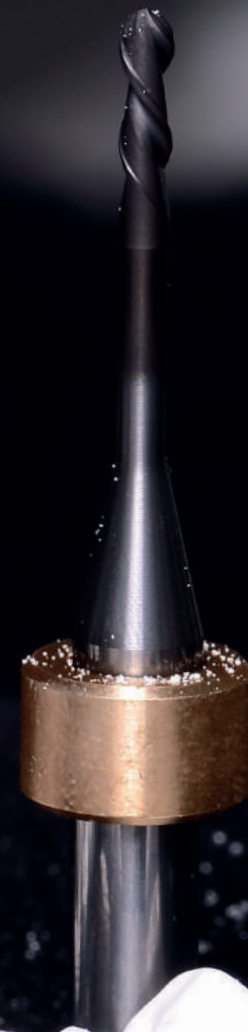
Implant-supported
restorations



Anatomically reduced
crowns and bridges



**PERFECT.
MILLING.**



NexxZr Tool – perfect. milling.

NexxZr Tool is a powerful portfolio of dental milling tools. The tool geometries are perfectly matched to the NexxZr zirconia portfolio and enable longer tool lifetime and precise milling results.

The portfolio consists of NexxZr Tool U with an uncoated surface and NexxZr Tool D with a special diamond coating for extremely long tool lifetime.

NexxZr Tool U (Uncoated)

- Solid carbide milling tool
- Double-edge radius cutter
- Optimized cutting areas
- Suitable for ZrO₂, Wax, PMMA

ZR02

WAX

PMMA

NexxZr Tool D (Diamond Coated)

- Carbide cutter with special coating for processing of highly abrasive ZrO₂ materials
- Layer thickness approx. 5µm (not electrically conductive)
- Double-edge radius cutter
- Very long tool lifetime

ZR02

High edge sharpness
more details

Long tool lifetime
Cost reduction and
comfort

NexxZr Tool U

Tool lifetime 
Edge sharpness 

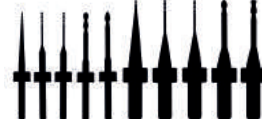
NexxZr Tool D

Tool lifetime 
Edge sharpness 

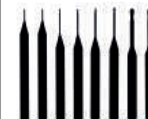
for AmannGirrbach



for imes-icore



for Roland



for vhf



for Zenotec



for Zirkonzahn





QUALITY
WHAT WE FULFILL





EXPERIENCE

Sagemax Bioceramics, Inc. is one of the leading dental zirconia manufacturers in the world since 2006.



ESTHETICS

2018 & 2019 Winner of 'The Dental Advisor Award' in the category Long-Term Performer: Esthetic Zirconia.



QUALITY

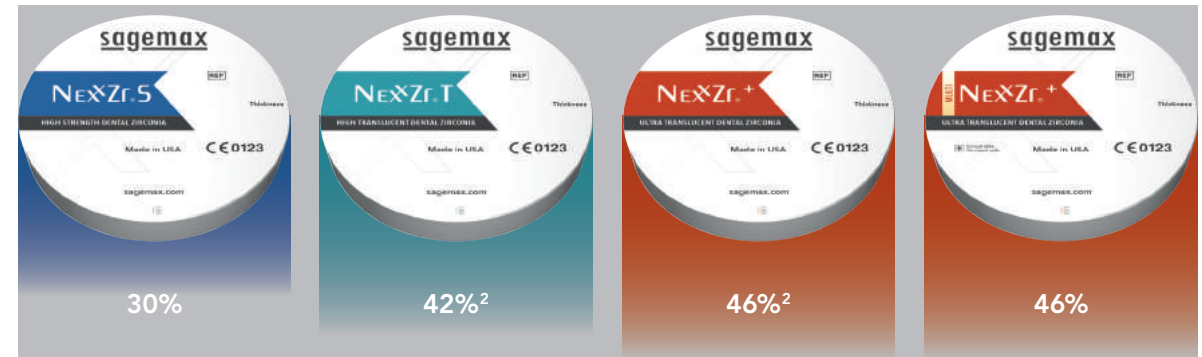
High quality standards according to TÜV SÜD / EN ISO 13485, Medical Device Single Audit Program (MDSAP) and MDD 93/42/ECC.



TECHNICAL DATA

OVERVIEW

TRANSLUCENCY [1-CR]*100



BIAXIAL FLEXURAL STRENGTH [MPa]¹

1370	1270	1000 white	880 preshaded	880
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LINEAR THERMAL EXPANSION / CTE [10^{-6} K^{-1}]

$10.1 \leq \text{CTE}^* \leq 11.1$ (*span 25 – 500°C)	$10.1 \leq \text{CTE}^* \leq 11.1$ (*span 25 – 500°C)	$9.6 \leq \text{CTE}^* \leq 10.6$ (*span 25 – 500°C)	$9.9 \leq \text{CTE}^* \leq 10.9$ (*span 25 – 500°C)
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COLORS

white	white, 16 A-D, 3 bleach	white, 6 A-D	7 A-D
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FRACTURE TOUGHNESS [$\text{MPa} \cdot \text{m}^{1/2}$]¹

≥ 5	≥ 5	≥ 3.5	≥ 3.5
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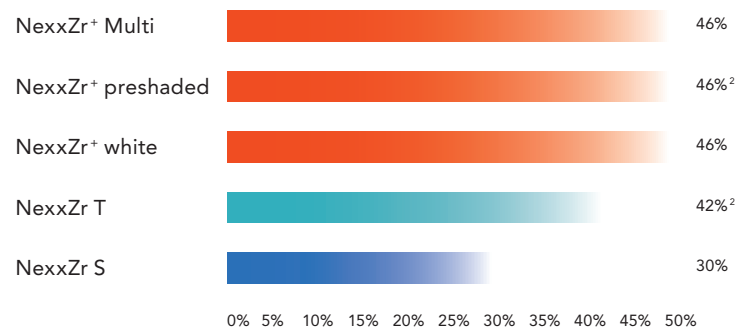
CLASS

Type II / class 5	Type II / class 5	Type II / class 5 white	Type II / class 4 preshaded	Type II / class 4
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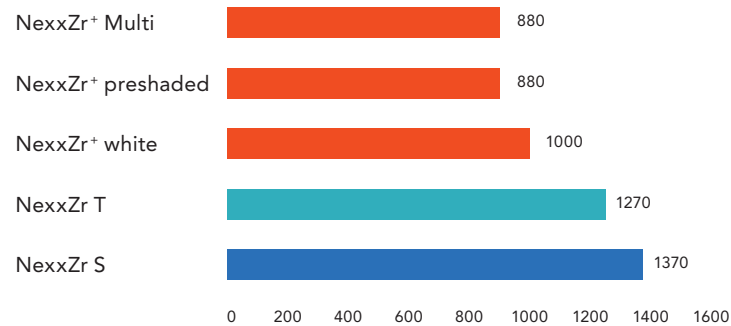
¹ Typical values acc. to EN ISO 6872 (polished specimen)

² Preshaded discs show lower values

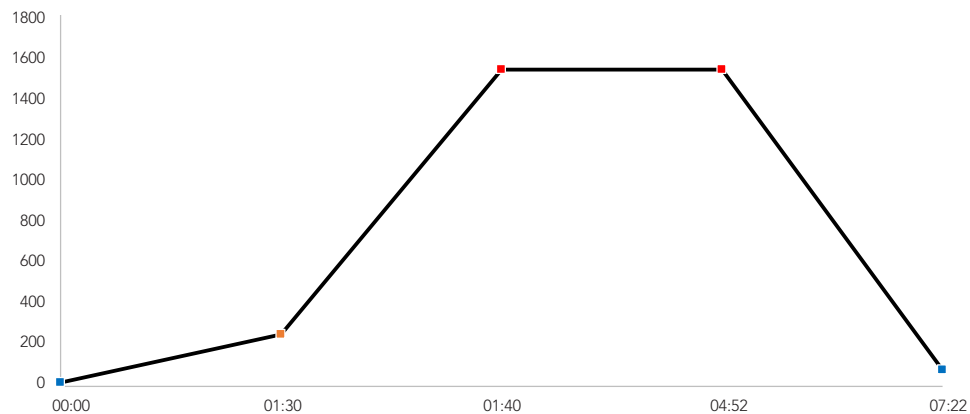
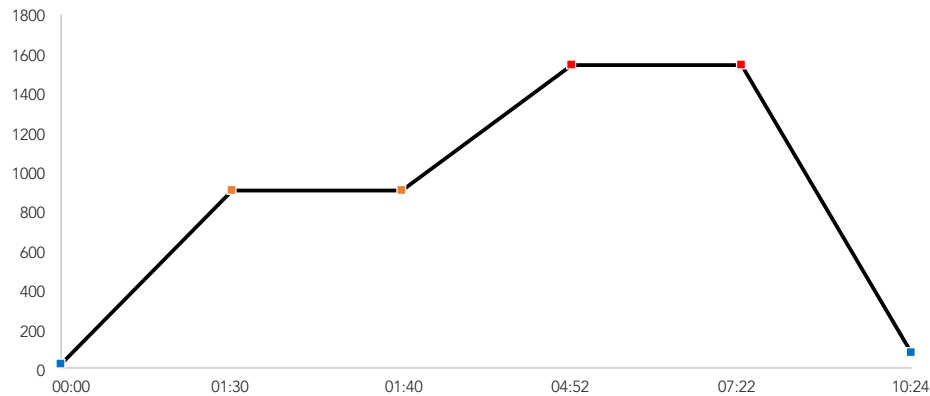
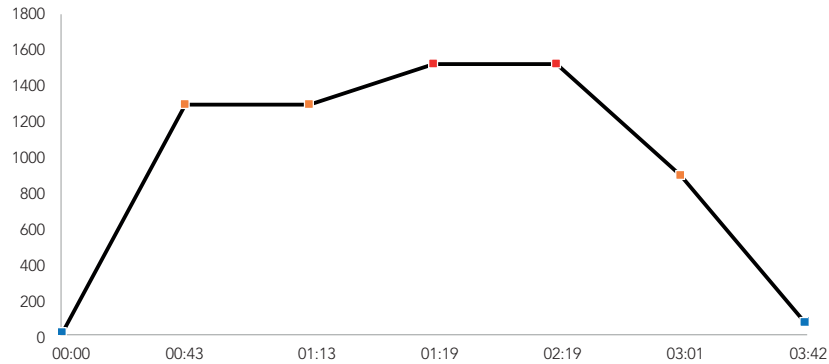
TRANSLUCENCY [1-CR]*100



BIAXIAL FLEXURAL STRENGTH [MPa]¹



NexxZr S, NexxZr T, NexxZr +



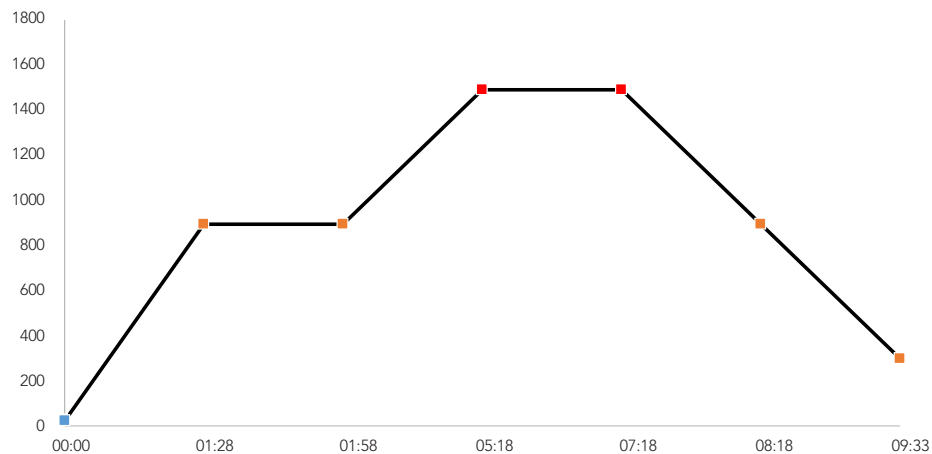
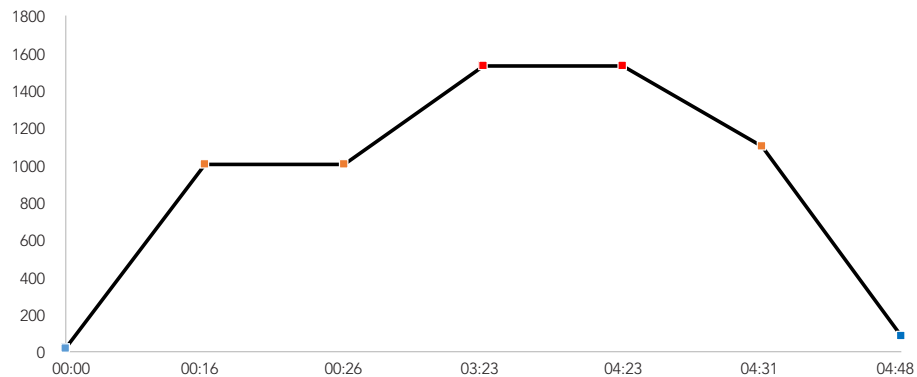
STANDARD	Number of units	Duration in h	Phase	Temperature in °C	Temperature in °F	Heating/cooling rate in °C/(min) in °F/(min)		Holding time (min)
	1 - 5	~ 3,7	Phase 1	20 - 1300	68 - 2372	30	54	30
			Phase 2	1300 - 1530	2372 - 2786	40	72	60
			Phase 3	1530 - 900	2786 - 1652	15	27	
			Phase 4	900 - 80	1652 - 176	20	36	
	5 - 10	~ 5,2	Phase 1	20 - 1300	68 - 2372	30	54	60
			Phase 2	1300 - 1530	2372 - 2786	40	72	120
			Phase 3	1530 - 900	2786 - 1652	15	27	
			Phase 4	900 - 80	1652 - 172	20	36	

LONG	Number of units	Duration in h	Phase	Temperature in °C	Temperature in °F	Heating/cooling rate in °C/(min) in °F/(min)		Holding time (min)
	1 - 20	~ 10,8	Phase 1	20 - 900	68 - 1652	10	18	10
			Phase 2	900 - 1540	1652 - 2804	3	5.4	150
			Phase 3	1540 - 80	2804 - 176	8	14.4	-
	>21	~ 12,8	Phase 1	20 - 900	68 - 1652	10	18	10
			Phase 2	900 - 1540	1652 - 2804	3	5.4	210
			Phase 3	1540 - 80	2804 - 176	8	14.4	-

OVER NIGHT	Number of units	Duration in h	Phase	Temperature in °C	Temperature in °F	Heating/cooling rate in °C/(min) in °F/(min)		Holding time (min)
	unlimited	~ 14,3	Phase 1	20 - 250	68 - 482	2	3.6	-
			Phase 2	250 - 1530	482 - 2786	4	7.2	240
			Phase 3	1530 - 80	2786 - 176	8	14.4	-



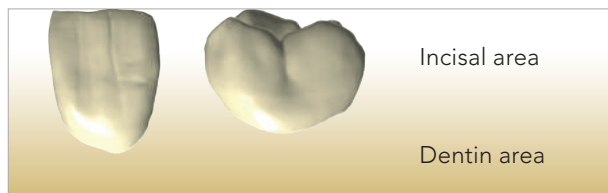
NexxZr + Multi



SPEED	Number of units	Duration in h	Phase	Temperature in °C	Temperature in °F	Heating/cooling rate in °C/(min) in °F/(min)		Holding time (min)
	1-5	~ 3,6	Phase 1	20 - 1000	68 - 1832	60	108	10
			Phase 2	1000 -1530	1832 - 2732	3	5.4	60
			Phase 3	1530 - 1100	2732 - 1832	50	90	-
			Phase 4	1100 - 80	1100 - 176	60	108	-

LONG	Number of units	Duration in h	Phase	Temperature in °C	Temperature in °F	Heating/cooling rate in °C/(min) in °F/(min)		Holding time (min)
	unlimited	~ 9,5	Phase 1	20 - 900	68 - 1652	10	18	30
			Phase 2	900 -1500	1652 - 2732	3	5.4	120
			Phase 3	1500 - 900	2732 - 1652	10	18	-
			Phase 4	900 - 300	1652 - 572	8	14.4	-

CAM Positioning:



For an optimal color gradient the incisal / occlusal positioning of the restoration is recommended




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