# sagemax



CAD/CAM PRODUCTS



# FOR
CAD/CAM MOVERS



## NexxZr Zirconia


NexxZr S 5

NexxZr T 7

NexxZr⁺ 9

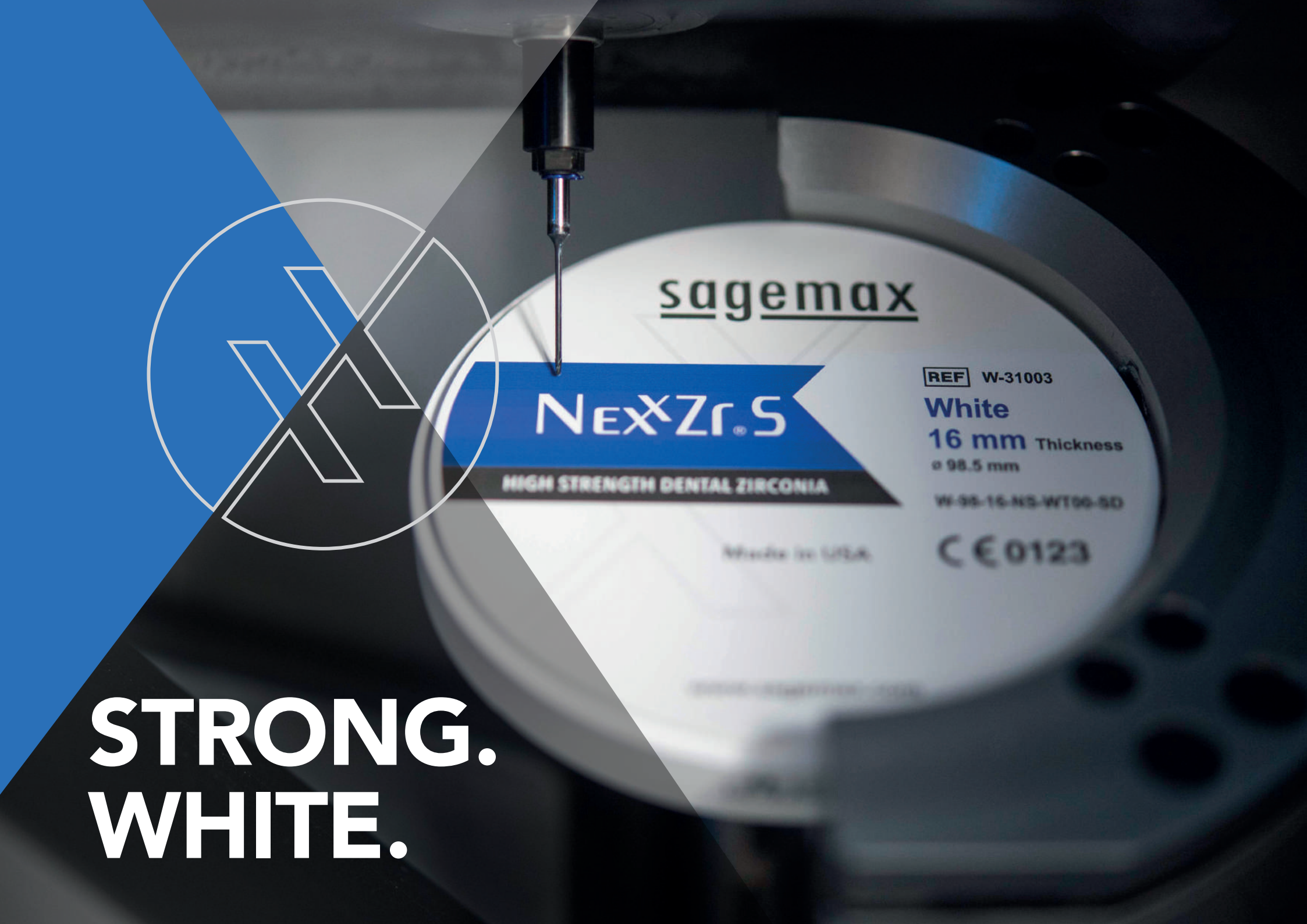
NexxZr⁺ Multi 11


## NexxZr Tools


NexxZr Tool Uncoated 13

NexxZr Tool Diamond Coated 13


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.




# 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**

| | |
|---|---|
| Translucency | ■□□□ |
| Flexural strength | ■■■■ |
| Esthetics | ■□□□ |






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).

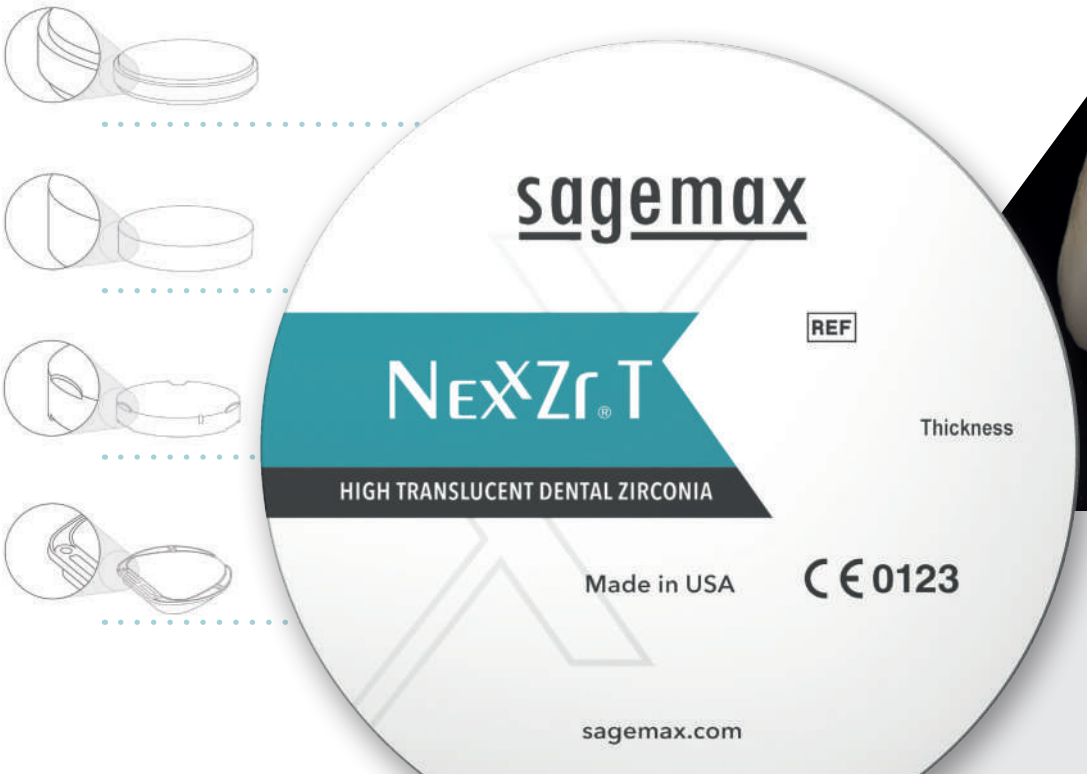
**NexxZr T - a translucent zirconia for individual esthetics.**

**Proven Esthetics**
**Dental Advisor Award**

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

**Maximum**
**variety of indications**

Translucency
Flexural strength
Esthetics




DENTAL ADVISOR 2019 TOP AWARD WINNER
DENTAL ADVISOR TOP AWARD
LTP: ESTHETIC ZIRCONIA



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
Flexural strength
Esthetics






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.

**Efficiency**
**integrated color gradient**

**Esthetics**
**highly translucent and polychromatic**

**Color selection**
**7 colors incl. gradient**

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.**

| | |
|---|---|
| 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.

**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

### 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)

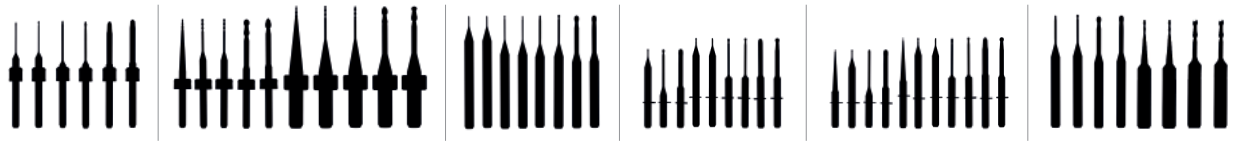
- Carbide cutter with special coating for processing of highly abrasive ZrO2 materials
- Layer thickness approx. 5µm (not electrically conductive)
- Double-edge radius cutter
- Very long tool lifetime

ZR02





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

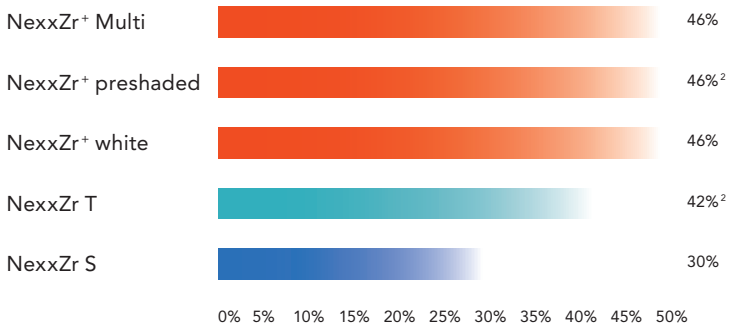
High quality standards according to TÜV SÜD / EN ISO 13485, Medical Device Single Audit Program (MDSAP) and MDD 93/42/ECC.



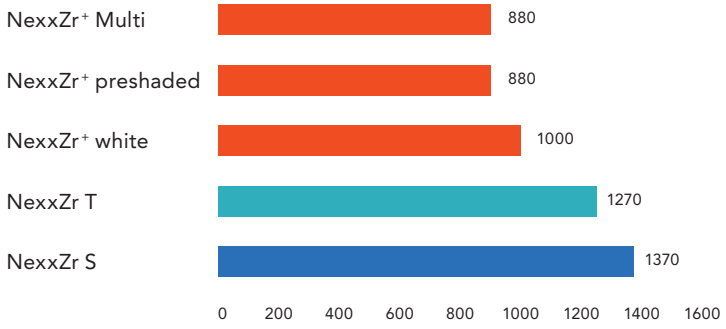
# TECHNICAL DATA

## OVERVIEW

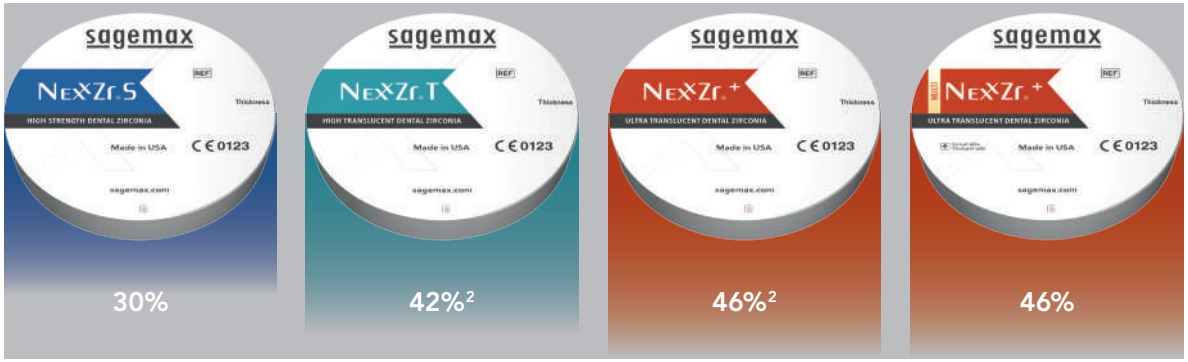
## TRANSLUCENCY [1-CR]*100




## BIAXIAL FLEXURAL STRENGTH [MPa]¹




## TRANSLUCENCY [1-CR]*100




## BIAXIAL FLEXURAL STRENGTH [MPa] [1]

| | | | | |
|---|---|---|---|---|
| 1370 | 1270 | 1000 white | 880 preshaded | 880 |

## LINEAR THERMAL EXPANSION / CTE [$10^{-6}$ $K^{-1}$]

| | | | |
|---|---|---|---|
| 10.1 ≤ CTE* ≤ 11.1 (*span 25 – 500°C) | 10.1 ≤ CTE* ≤ 11.1 (*span 25 – 500°C) | 9.6 ≤ CTE* ≤ 10.6 (*span 25 – 500°C) | 9.9 ≤ CTE* ≤ 10.9 (*span 25 – 500°C) |

## COLORS

| | | | |
|---|---|---|---|
| white | white, 16 A-D, 3 bleach | white, 6 A-D | 7 A-D |

## FRACTURE TOUGHNESS [MPa*$m^{1/2}$] [1]

| | | | |
|---|---|---|---|
| ≥ 5 | ≥ 5 | ≥ 3.5 | ≥ 3.5 |

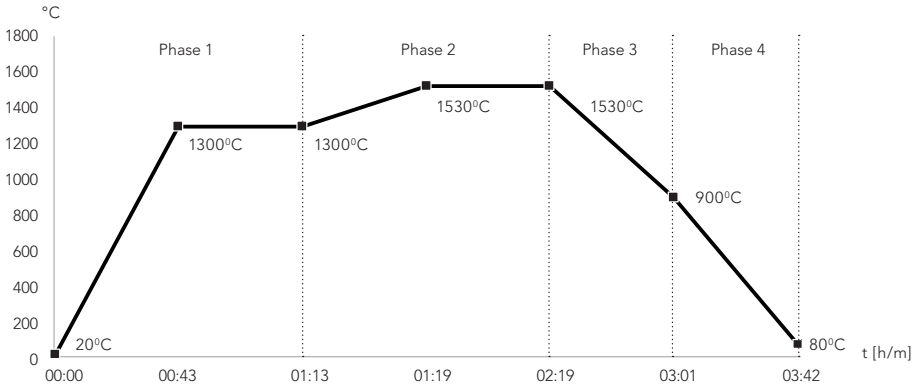
## CLASS

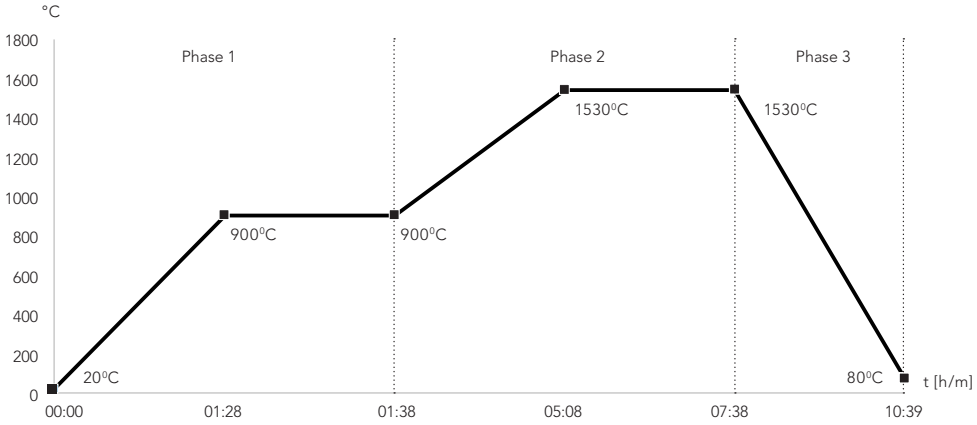
| | | | | |
|---|---|---|---|---|
| Type II / class 5 | Type II / class 5 | Type II / class 5 white | Type II / class 4 preshaded | Type II / class 4 |

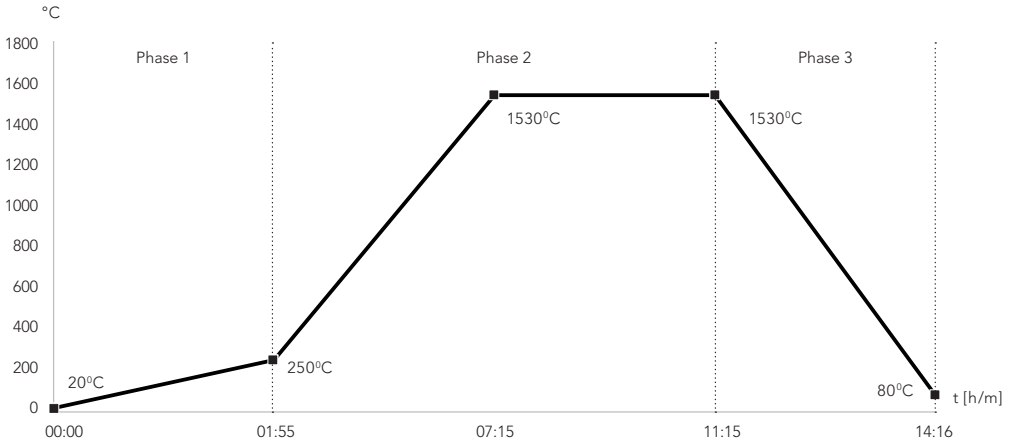
[1] Typical values acc. to EN ISO 6872 (polished specimen)

[2] Preshaded discs show lower values

# NexxZr S, NexxZr T, NexxZr +




## STANDARD

| Number of units | Duration h/min | Phase | Temperature in °C | Temperature in °F | Heating/cooling rate in °C/(min) | Heating/cooling rate in °F/(min) | Holding time (min) |
|---|---|---|---|---|---|---|---|
| 1 - 5 | ~ 3:42 | 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 | ~ 5:12 | 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 - 176 | 20 | 36 | |

## LONG

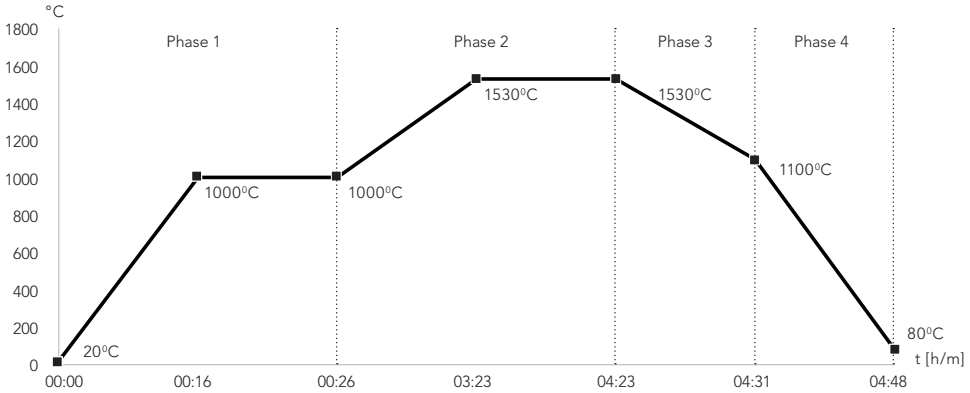
| Number of units | Duration h/min | Phase | Temperature in °C | Temperature in °F | Heating/cooling rate in °C/(min) | Heating/cooling rate in °F/(min) | Holding time (min) |
|---|---|---|---|---|---|---|---|
| 1 - 20 | ~ 10:39 | Phase 1 | 20 - 900 | 68 - 1652 | 10 | 18 | 10 |
| | | Phase 2 | 900 -1530 | 1652 - 2786 | 3 | 5.4 | 150 |
| | | Phase 3 | 1530 - 80 | 2786 - 176 | 8 | 14.4 | - |
| >21 | ~ 11:39 | Phase 1 | 20 - 900 | 68 - 1652 | 10 | 18 | 10 |
| | | Phase 2 | 900 - 1530 | 1652 - 2786 | 3 | 5.4 | 210 |
| | | Phase 3 | 1530 - 80 | 2786 - 176 | 8 | 14.4 | - |

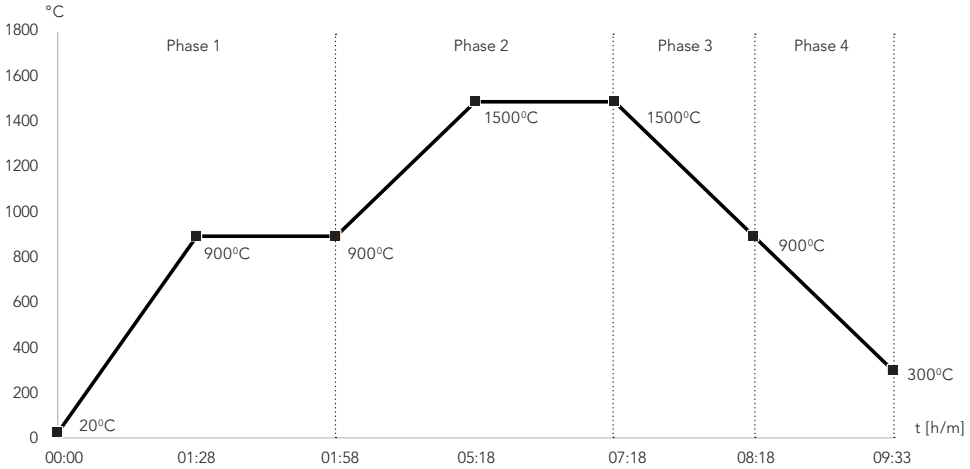
## OVER NIGHT

| Number of units | Duration h/min | Phase | Temperature in °C | Temperature in °F | Heating/cooling rate in °C/(min) | Heating/cooling rate in °F/(min) | Holding time (min) |
|---|---|---|---|---|---|---|---|
| unlimited | ~ 14:16 | 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



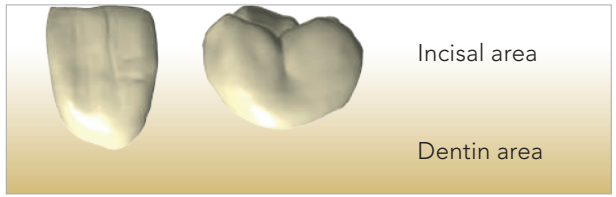

## SPEED

| Number of units | Duration h/min | Phase | Temperature in °C | Temperature in °F | Heating/cooling rate in °C/(min) | Heating/cooling rate in °F/(min) | Holding time (min) |
|---|---|---|---|---|---|---|---|
| 1-5 | ~ 4:48 | Phase 1 | 20 - 1000 | 68 - 1832 | 60 | 108 | 10 |
| | | Phase 2 | 1000 -1530 | 1832 - 2786 | 3 | 5.4 | 60 |
| | | Phase 3 | 1530 - 1100 | 2786 - 2012 | 50 | 90 | - |
| | | Phase 4 | 1100 - 80 | 2012 - 176 | 60 | 108 | - |

## LONG

| Number of units | Duration h/min | Phase | Temperature in °C | Temperature in °F | Heating/cooling rate in °C/(min) | Heating/cooling rate in °F/(min) | Holding time (min) |
|---|---|---|---|---|---|---|---|
| unlimited | ~ 9:33 | 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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