Product catalog
CAD/CAM
Materials

CLOSE TO YOU

Dental
Direkt

HIGH
PERFORMANCE
CERAMICS

23 MIO
UNITS

Clinically proven

Content

Dental Direkt

01.
High Performance
Ceramics

The raw materials

For us, it is a matter of course that only materials with the best properties come into consideration for dental products. The biocompatibility is the ultimate priority, in the selection of raw materials. Moreover only a high-purity, nanoscale ZrO_2 is suitable for medical use. To ensure reproducable batch stability, the raw material must indicate an extremely homogenous grain size distribution.

Chemical composition [wt.%]

	HS *DDBioZ* 3Y-TZP-A	HT *DDBioZX²* 3Y-TZP-LA	HT+ *DDcubeONE®* 4Y-TZP	SHT *DDcubeX²®* 5Y-TZP
$ZrO_2 + HfO_2 + Y_2O_3$	≥ 99,0	≥ 99,0	≥ 99,0	≥ 99,0
Y_2O_3	< 6	< 6	< 8	< 10
Al_2O_3	< 0,5	≤ 0,15	< 0,15	≤ 0,01
Other oxides	< 1,0	< 1,0	< 1,0	< 1,0
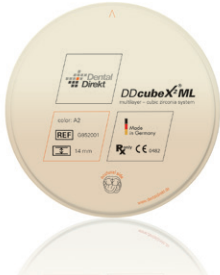
	HS *DDBioZcolor* 3Y-TZP-A	HT *DDBioZX²color* 3Y-TZP-LA	HT+ *DDcubeONE®ML* 4Y-TZP	SHT *DDcubeX²®ML* 5Y-TZP
Color method Industrial precolored blanks	Multi Additive Technology®	Multi Additive Technology®	Multi Additive Technology®	Multi Additive Technology®
Additive	Fe_2O_3 | Er_2O_3 | MnO_2	Fe_2O_3 | Er_2O_3 | MnO_2	Fe_2O_3 | Er_2O_3 | Co_3O_4	Fe_2O_3 | Er_2O_3 | MnO_2
Colors	in 8 VITA® shades + 5 universal colors	in 16 VITA® shades + 5 universal colors	in 8 VITA® shades	in 8 VITA® shades

Multi Additive Technology® – more than just color

We achieve brilliant color effects by adding selected ions of rare soils or transition metals into the zirconium matrix. Our balanced ion formulation and the homogeneous distribution in the zirconia structure is what we call Multi Additive Technology®. It is the key to excellent mechanical and optical characteristics.

By means of our Multi Additive Technology colored blanks show a natural chroma based on the definition in the VITA classical® color scale, while maintaining the natural translucency of the zirconia material.

	SHT Super high translucent	**HT+** High translucent plus
MULTI LAYER	*DDcubeX²ML* 8 VITA®-shades	*DDcubeONEML* 8 VITA®-shades
MONO CHROME		
WHITE	*DDcubeX²*	*DDcubeONE*
Dentine Liquids	*DDProShadeC* *DDBasicShade*	*DDProShadeC* *DDProShadeZ* *DDBasicShade*

coloring liquid for use with white dental direkt zirconium milling blanks

HT

High translucent

HS

High strength

DD**Bio**ZX²color
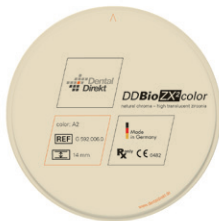
16 VITA®-
+ 5 Universal-
shades

DD**Bio**Zcolor

8 VITA®-
+ 5 Universal-
shades

DD**Bio**ZX²

DD**Bio**Z
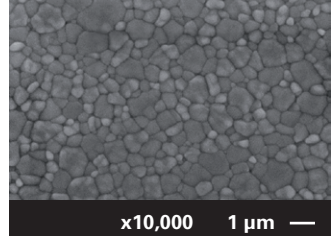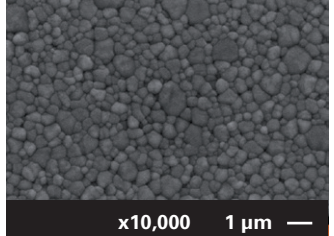
DD**Pro**ShadeZ

DD**Basic**Shade

DD**Pro**ShadeZ
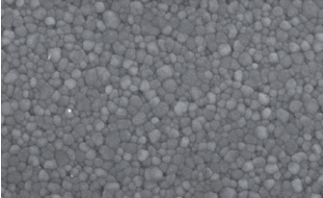
DD**Basic**Shade

coloring liquid for use with white dental direkt zirconium milling blanks

	SHT Super high translucent	HT+ High translucent plus
	DDcubeX²® 5Y-TZP	**DDcubeONE**® 4Y-TZP
Translucency % (1 mm thick)	49%	45%
Strength MPa	750 (white) – 800 MPa (ML)	1.000 MPa (white) – 1.250 MPa (ML)
Type and Indication (acc. to ISO 6872)	type II, class 4 ≤ 3 units	type II, class 5 ≥ 4 units
Cubic phase %	~ 50%	~ 30%
SEM picture of crystal structure	x10,000 1 µm —	x10,000 1 µm —

Source: R&D Dental Direkt. Flex resistances measured in MPa in accordance with DIN EN ISO 6872 in the 3 point approach. Strengths can vary depending on the test methods and sample preparation. The values indicated in the DD processing instructions are exclusively determined by external and independent laboratories. 4-point strength values are usually lower than 3-point values. Translucency measured by means of a spectrophotometer on 1 mm thick, polished samples.

HT High translucent	HS High strength
DD Bio ZX²	**DD Bio Z**
3Y-TZP-LA	3Y-TZP-A
40%	35%
1.100 MPa (white) − 1.250 MPa (color)	1.300 MPa (white) − 1.450 MPa (color)
type II, class 5	type II, class 5
≥ 4 units	≥ 4 units
~ 0%	0%
x10,000 1 µm —	x10,000 1 µm —

		VENEERS	INLAYS/ ONLAYS	reduced CROWN	full contour CROWN anterior tooth	full contour CROWN posterior tooth	Hybrid ABUTMENT CROWN
SHT	*DDcubeX²®* *DDcubeX²ML®*	⬤	⬤	⬤	⬤	⬤	⬤
HT+	*DDcubeONE®* *DDcubeONEML®*	⬤	⬤	⬤	⬤	⬤	⬤
HT	*DDBioZX²* *DDBioZX²color*			⬤		⬤	⬤
HS	*DDBioZ* *DDBioZcolor*			⬤			

*Ideal results depend on individual circumstances.

Influence on the final shade of a fixed restoration

When choosing a zirconia material for a specific clinical case several aspects should be considered, because the individual patients conditions might offer very different preconditions.

An important factor is the shade of the stump. If there is no serious deviation from the desired final shade of the fixed restoration, a super high translucent zirconia (DD cubeX²®) might be the material of choice.

The quantity of substance removal by preparation can be significant as well, as it affects the wall thickness of the restoration. The thinner a restoration the higher its translucency, the more an underlying tooth structure will influence the final shade appearance.

| full contour BRIDGE (3 unit) | full contour BRIDGE (≥ 4 unit) | reduced BRIDGE (3 unit) | reduced BRIDGE (≥ 4 unit) | Hybrid ABUTMENT | BAR |

stump-color

TRANSLUCENCY

STABILITY

slightly discolored

medium discolored

strongly discolored/metal
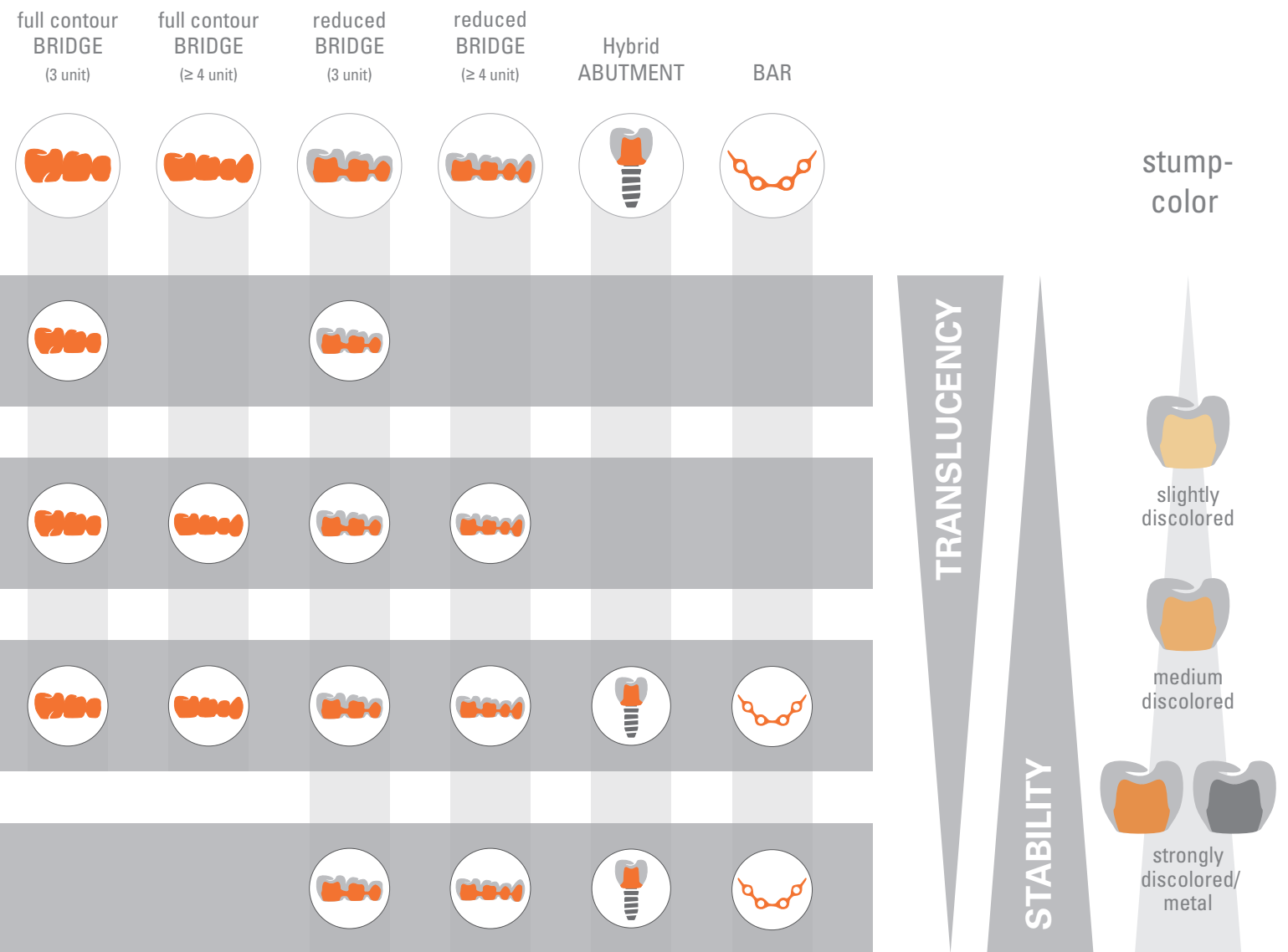
Indication guide_DD medical zirconia_Rev.05_2019/01

In case of a significantly discolored stump and preparation with low substance removal a more opaque zirconia (DD Bio ZX², DD Bio Z) could be used to cover up the underlying structure.

Especially when working with a high+ (DD cube ONE®) or super high translucent zirconia material also the cement has to be well-chosen, taking its level of opacity and shade into consideration. Opaque or colored cementation materials might change the shade effect of super high translucent zirconia. Translucent cements on the other side hardly influence the interaction of tooth structure and restoration.

You find our cementation guide on www.dentaldirekt.de/en/downloads

DDcubeX²98 ®

cubic zirconia system

WHITE

perfectly suitable for

- high aesthetic monolithic crowns and bridges (up to 3 units, including molar restorations)
- especially for monolithic anterior restorations (bridges up to 3 units)
- cut back (one layer)
- high aesthetic veneering

Technical data	
Type	5Y-TZP
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 4 – max. 3 unit bridges incl. molar restorations
Color	white
Aesthetics	super high translucent
Sintering temperatur	1.450 °C
Bending strength	750 MPa (3 point test)
Fracture toughness	> 4,0 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade C DD Basic Shade DD Art Elements

ø 98,5
ø 94
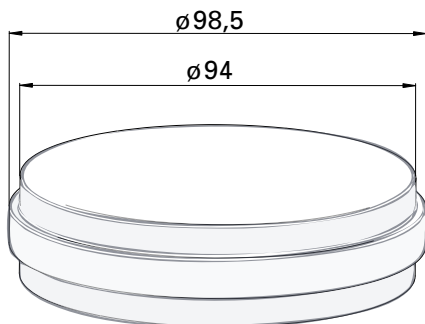
Height	Order-no.
10 mm	G 710
12 mm	G 711
14 mm	G 712
16 mm	G 713
18 mm	G 714
20 mm	G 715
25 mm	G 716

ⓘ Consult instructions for use

Not all products are available in every country.

DDcubeX²ML 98

multilayer – cubic zirconia system

SHT

MULTI LAYER

perfectly suitable for

- high aesthetic monolithic crowns and bridges (up to 3 units, including molar restorations)
- especially for monolithic anterior restorations (bridges up to 3 units)
- cut back (one layer)
- high aesthetic veneering

Technical data	
Type	5Y-TZP
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 4 – max. 3 unit bridges incl. molar restorations
Color	precolored acc. to VITA®
Aesthetics	super high translucent
Sintering temperatur	1.450 °C
Bending strength	800 MPa (3 point test)
Fracture toughness	> 4,0 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
Multi Additive Technology®	reliable reproduction of color via industrial coloring

Measure	A1	A2	A3	A3,5
98,5 x 14 mm	G852007	G852001	G852002	G852003
98,5 x 18 mm	G854007	G854001	G854002	G854003
98,5 x 22 mm	G856007	G856001	G856002	G856003

Measure	B1	B2	C2	D3
98,5 x 14 mm	G852008	G852004	G852005	G852006
98,5 x 18 mm	G854008	G854004	G854005	G854006
98,5 x 22 mm	G856008	G856004	G856005	G856006

Consult instructions for use

Pre-colored blanks are not allowed to be used with patented coloring technologies

Not all products are available in every country.

Dental Direkt

DDcubeONE®98

high strength – cubic zirconia system

HT+

WHITE

perfectly suitable for

- high aesthetic monolithic crowns and bridges (≥ 4 units)
- especially for monolithic anterior restorations (bridges ≥ 4 units)
- cut back (one layer)
- high aesthetic veneering

Technical data	
Type	4Y-TZP
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	high translucent plus
Sintering temperatur	1.450 °C
Bending strength	1.000 MPa (3 point test)
Fracture toughness	~ 10 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Pro Shade C DD Basic Shade DD Art Elements

ø 98,5
ø 94
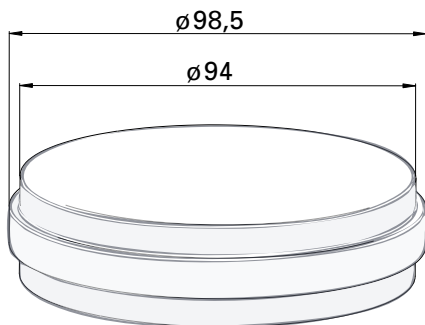
Height	Order-no.
10 mm	G820
14 mm	G822
18 mm	G824
20 mm	G825
25 mm	G826

ℹ️ Consult instructions for use

Not all products are available in every country.

DD*cube*ONE®ML 98

multilayer – high strength cubic zirconia

HT+

MULTI LAYER

perfectly suitable for

- high aesthetic monolithic crowns and bridges (≥ 4 units)
- especially for monolithic anterior restorations (bridges ≥ 4 units)
- cut back (one layer)
- high aesthetic veneering

Technical data	
Type	4Y-TZP
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	precolored acc. to VITA®
Aesthetics	high translucent plus
Sintering temperatur	1.450 °C
Bending strength	1.250 MPa (3 point test)
Fracture toughness	~ 10 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
Multi Additive Technology®	reliable reproduction of color via industrial coloring

Measure	A1	A2	A3	A3,5
98,5 x 14 mm	G832007	G832001	G832002	G832003
98,5 x 18 mm	G834007	G834001	G834002	G834003
98,5 x 22 mm	G836007	G836001	G836002	G836003

Measure	B1	B2	C2	D3
98,5 x 14 mm	G832008	G832004	G832005	G832006
98,5 x 18 mm	G834008	G834004	G834005	G834006
98,5 x 22 mm	G836008	G836004	G836005	G836006

Consult instructions for use — Pre-colored blanks are not allowed to be used with patented coloring technologies

Not all products are available in every country.

Dental Direkt

DD**Bio**ZX²98

high translucent zirconia

HT

WHITE

perfectly suitable for

- monolithic crowns and bridges (of any span range)
- especially for monolithic bridges ≥ 4 units
- cut back (one layer)
- high aesthetic veneering (of any span range)

Technical data	
Type	3Y-TZP-LA
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	high translucent
Sintering temperatur	1.450 °C
Bending strength	1.100 MPa (4 point test)
Fracture toughness	> 10 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements

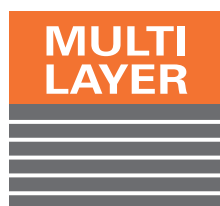ø98,5
ø94

Height	Order-no.
10 mm	G 590
12 mm	G 591
14 mm	G 592
16 mm	G 593
18 mm	G 594
20 mm	G 595
25 mm	G 596

Consult instructions for use

Not all products are available in every country.

DD**Bio**ZX²71

high translucent zirconia

HT

WHITE

perfectly suitable for

- monolithic crowns and bridges
  (of any span range)
- especially for monolithic bridges ≥ 4 units
- cut back (one layer)
- high aesthetic veneering (of any span range)

Technical data	
Type	3Y-TZP-LA
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	high translucent
Sintering temperatur	1.450 °C
Bending strength	1.100 MPa (4 point test)
Fracture toughness	> 10 MPa√m
CAM system	ceramill® motion systems (Amann Girrbach)
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements

Height	Order-no.
12 mm	G 230
14 mm	G 231
16 mm	G 232
18 mm	G 235
20 mm	G 233
25 mm	G 234

Consult instructions for use

Not all products are available in every country.

DD**Bio**ZX²19

high translucent zirconia

HT

<div style="background: orange; color: white">**WHITE**</div>

perfectly suitable for

- monolithic crowns and bridges (of any span range)
- especially for monolithic bridges ≥ 4 units
- cut back (one layer)
- high aesthetic veneering (of any span range)

Technical data	
Type	3Y-TZP-LA
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	high translucent
Sintering temperatur	1.450 °C
Bending strength	1.100 MPa (4 point test)
Fracture toughness	> 10 MPa√m
CAM system	Sirona inLab® and inLab® MC XL system
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements
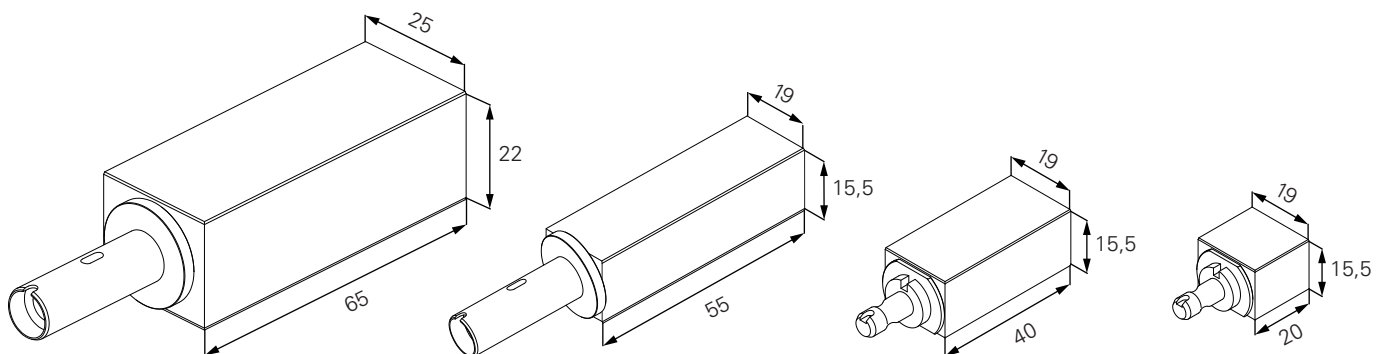
Article	DD Bio ZX² 65/25	DD Bio ZX² 55/19 MC XL	DD Bio ZX² 40/19	DD Bio ZX² 20/19
Order-no.	G 613	G 612.1	G 611	G 610
Measure	65 x 25 x 22	55 x 19 x 15,5	40 x 19 x 15,5	20 x 19 x 15,5
Item	1	2	10	24

ℹ️ Consult instructions for use

Not all products are available in every country.

DD*Bio* ZX² *98* color

natural chroma – high translucent zirconia

HT

MONO CHROME

perfectly suitable for

- monolithic crowns and bridges (of any span range)
- especially for monolithic bridges ≥ 4 units
- cut back (one layer)
- high aesthetic veneering (of any span range)

Technical data	
Type	3Y-TZP-LA
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	in 5 universal colors
Aesthetics	high translucent
Sintering temperatur	1.450 °C
Bending strength	1.250 MPa (3 point test)
Fracture toughness	> 10 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
Multi Additive Technology®	reliable reproduction of color via industrial coloring

Height	light A1 · A2 · B1 · B2 · C1	medium A3 · B3 · B4 · C2 · C3 D2 · D3 · D4	intense A3,5 · A4 · C4	low chromatic A1 · A2 · A3 · B2 · B3 D2 · D3	high chromatic A3,5 · A4 · B4
10 mm	G 590.001.0	G 590.002.0	G 590.003.0	G 590.004.0	G 590.005.0
14 mm	G 592.001.0	G 592.002.0	G 592.003.0	G 592.004.0	G 592.005.0
18 mm	G 594.001.0	G 594.002.0	G 594.003.0	G 594.004.0	G 594.005.0
20 mm	G 595.001.0	G 595.002.0	G 595.003.0	G 595.004.0	G 595.005.0
25 mm	G 596.001.0	G 596.002.0	G 596.003.0	G 596.004.0	G 596.005.0

ℹ Consult instructions for use

Not all products are available in every country.

Pre-colored blanks are not allowed to be used with patented coloring technologies

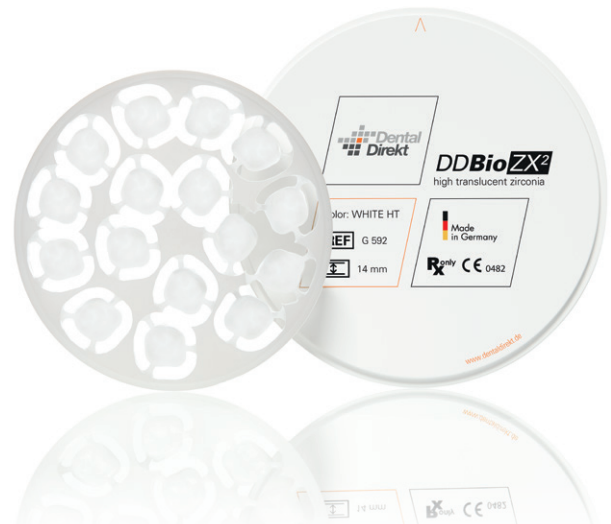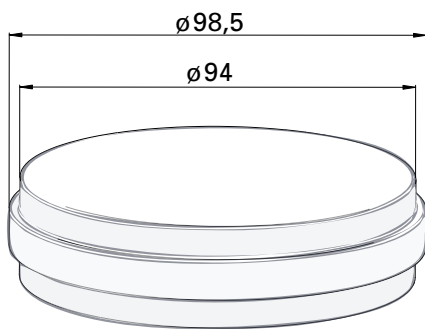**Dental Direkt**

HT

DD**Bio**ZX²**98**color

natural chroma – high translucent zirconia
according to VITA® shades

MONO CHROME

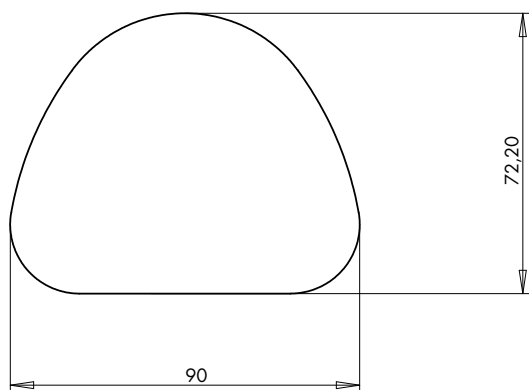**perfectly suitable for**

- monolithic crowns and bridges
  (of any span range)

- especially for monolithic bridges ≥ 4 units

- cut back (one layer)

- high aesthetic veneering (of any span range)

Technical data	
Type	3Y-TZP-LA
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	precolored acc. to VITA®
Aesthetics	high translucent
Sintering temperatur	1.450 °C
Bending strength	1.250 MPa (3 point test)
Fracture toughness	> 10 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
Multi Additive Technology®	reliable reproduction of color via industrial coloring

ø 98,5
ø 94

Height	A1	A2	A3	A3,5	A4
10 mm	G 590.012.0	G 590.006.0	G 590.007.0	G 590.008.0	G 590.013.0
14 mm	G 592.012.0	G 592.006.0	G 592.007.0	G 592.008.0	G 592.013.0
18 mm	G 594.012.0	G 594.006.0	G 594.007.0	G 594.008.0	G 594.013.0
20 mm	G 595.012.0	G 595.006.0	G 595.007.0	G 595.008.0	G 595.013.0
25 mm	G 596.012.0	G 596.006.0	G 596.007.0	G 596.008.0	G 596.013.0

Consult instructions for use   Pre-colored blanks are not allowed to be used with patented coloring technologies

Not all products are available in every country.

High translucent (3Y-TZP-LA)

Height	B1	B2	B3	B4
10 mm	G 590.014.0	G 590.009.0	G 590.015.0	G 590.016.0
14 mm	G 592.014.0	G 592.009.0	G 592.015.0	G 592.016.0
18 mm	G 594.014.0	G 594.009.0	G 594.015.0	G 594.016.0
20 mm	G 595.014.0	G 595.009.0	G 595.015.0	G 595.016.0
25 mm	G 596.014.0	G 596.009.0	G 596.015.0	G 596.016.0

Height	C1	C2	C3	C4
10 mm	G 590.017.0	G 590.010.0	G 590.018.0	G 590.019.0
14 mm	G 592.017.0	G 592.010.0	G 592.018.0	G 592.019.0
18 mm	G 594.017.0	G 594.010.0	G 594.018.0	G 594.019.0
20 mm	G 595.017.0	G 595.010.0	G 595.018.0	G 595.019.0
25 mm	G 596.017.0	G 596.010.0	G 596.018.0	G 596.019.0

Height	D2	D3	D4
10 mm	G 590.020.0	G 590.011.0	G 590.021.0
14 mm	G 592.020.0	G 592.011.0	G 592.021.0
18 mm	G 594.020.0	G 594.011.0	G 594.021.0
20 mm	G 595.020.0	G 595.011.0	G 595.021.0
25 mm	G 596.020.0	G 596.011.0	G 596.021.0

Consult instructions for use

Not all products are available in every country.

Pre-colored blanks are not allowed to be used with patented coloring technologies

DD**Bio**ZW**iso**

high strength zirconia

HS

WHITE

perfectly suitable for

- aesthetic veneering, crowns, bridges of any span range
- implant superstructures
- abutments

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	opaque
Sintering temperatur	1.450 °C
Bending strength	1.300 MPa (4 point test)
Fracture toughness	> 9 MPa√m
CAM system	open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements

ø 98,5
ø 94

Height	Order-no.
10 mm	G 513
12 mm	G 526
14 mm	G 505
16 mm	G 527
18 mm	G 506
20 mm	G 507
25 mm	G 553

ℹ️ Consult instructions for use
Not all products are available in every country.

HS

DD**Bio**ZA

high strength zirconia

WHITE

perfectly suitable for

- aesthetic veneering, crowns, bridges of any span range
- implant superstructures
- abutments

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	opaque
Sintering temperatur	1.450 °C
Bending strength	1.300 MPa (4 point test)
Fracture toughness	> 9 MPa√m
CAM system	ceramill® motion Systeme (Amann Girrbach)
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements

72,20

90
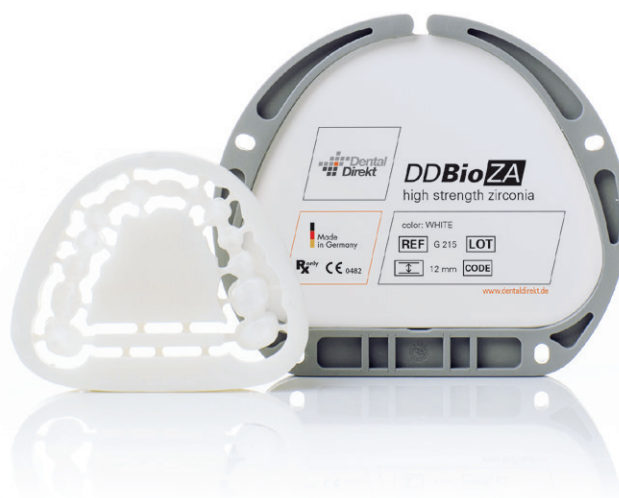
Height	Order-no.
12 mm	G 215
14 mm	G 214
16 mm	G 216
18 mm	G 219
20 mm	G 217
25 mm	G 218

Consult instructions for use
Not all products are available in every country.

Dental Direkt

DD**Bio**ZS

high strength zirconia

HS

WHITE

perfectly suitable for

- aesthetic veneering, crowns, bridges of any span range
- implant superstructures
- abutments

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	white
Aesthetics	opaque
Sintering temperatur	1.450 °C
Bending strength	1.300 MPa (4 point test)
Fracture toughness	> 9 MPa√m
CAM system	Sirona inLab® und inLab® MC XL-System
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements
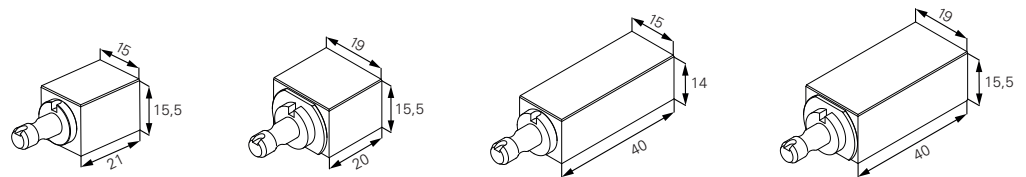
Article	DD Bio ZS 21/15	DD Bio ZS 20/19	DD Bio ZS 40/15	DD Bio ZS 40/19
Order-no.	G 603	G 600	G 601	G 602
Measurements	21 x 15 x 15,5	20 x 19 x 15,5	40 x 15 x 14	40 x 19 x 15,5
Item	25	24	10	10
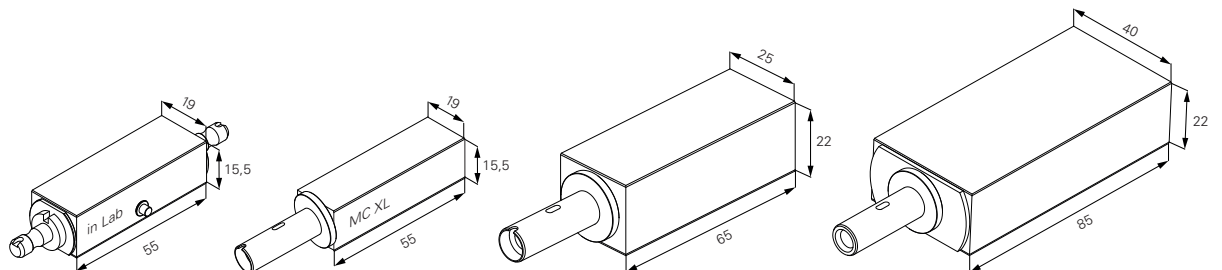
Article	DD Bio ZS 55/19 inLab	DD Bio ZS 55/19 MC XL	DD Bio ZS 65/25	DD Bio ZS 85/40
Order-no.	G 604	G 604.1	G 605	G 607
Measurements	55 x 19 x 15,5	55 x 19 x 15,5	65 x 25 x 22	85 x 40 x 22
Item	2	2	1	1

Consult instructions for use

Not all products are available in every country.

DD**Bio**ZW**iso**color

high strength zirconia

HS

MONO CHROME

perfectly suitable for

- aesthetic veneering, crowns, bridges of any span range
- implant superstructures
- abutments

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	in 5 universal colors
Aesthetics	opaque
Sintering temperatur	1.450 °C
Bending strength	1.450 MPa (3 point test)
Fracture toughness	> 9 MPa√m
CAM system	open systems for Ø 98,5 mm blanks

ø 98,5
ø 94

DD**Bio**ZW**iso**color
natural chroma · high strength zirconia

color: 500
REF G 522.500.0
14 mm
Made in Germany
Rx only CE 0482
www.dentaldirekt.de

Height	500 A1 · A2	800 A3 · B3	1000 C2 · C3	1333 A3,5 · B4	2000 A4
10 mm	G 520.500.0	G 520.800.0	G 520.1000.0	G 520.1333.0	G 520.2000.0
14 mm	G 522.500.0	G 522.800.0	G 522.1000.0	G 522.1333.0	G 522.2000.0
18 mm	G 524.500.0	G 524.800.0	G 524.1000.0	G 524.1333.0	G 524.2000.0
20 mm	G 525.500.0	G 525.800.0	G 525.1000.0	G 525.1333.0	G 525.2000.0
25 mm	G 526.500.0	G 526.800.0	G 526.1000.0	G 526.1333.0	G 526.2000.0

Consult instructions for use

Not all products are available in every country.

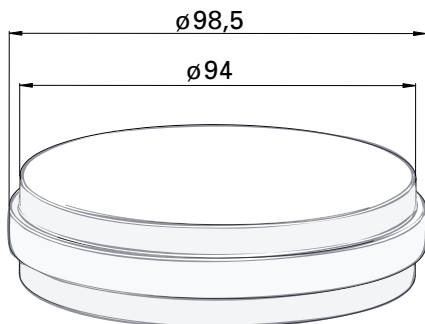Pre-colored blanks are not allowed to be used with patented coloring technologies

Dental Direkt

DD**Bio**ZW**iso**color

HS

high strength zirconia
according to VITA® shades

MONO CHROME

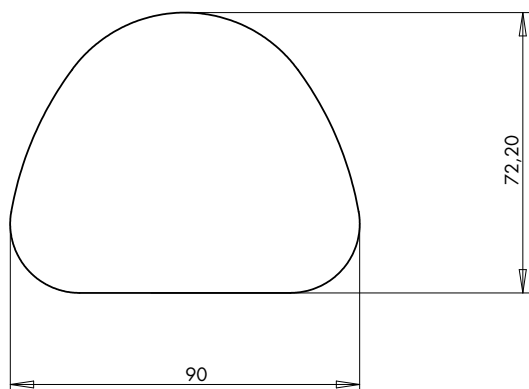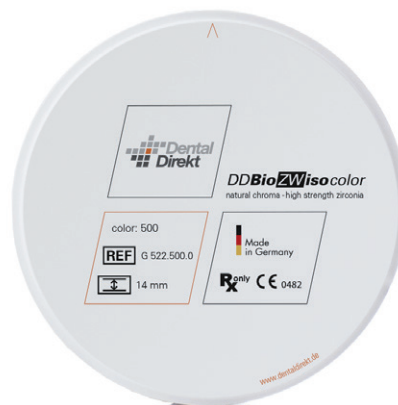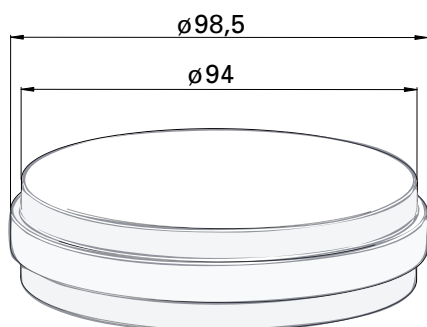**perfectly suitable for**

- aesthetic veneering, crowns, bridges of any span range
- implant superstructures
- abutments

available June 2019

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	type II, class 5 – all dental constructions, all bridges ≥ 4 elements with max. 2 connected pontics
Color	precolored acc. to VITA®
Aesthetics	opaque
Sintering temperatur	1.450 °C
Bending strength	1.450 MPa (3 point test)
Fracture toughness	> 9 MPa√m
CAM system	open systems for Ø 98,5 mm blanks

Measure	A1	A2	A3	A3,5
98,5 x 10 mm	G520A10	G520A20	G520A30	G520A350
98,5 x 14 mm	G522A10	G522A20	G522A30	G522A350
98,5 x 18 mm	G524A10	G524A20	G524A30	G524A350
98,5 x 20 mm	G525A10	G525A20	G525A30	G525A350
98,5 x 25 mm	G526A10	G526A20	G526A30	G526A350

Measure	B1	B2	C2	D3
98,5 x 10 mm	G520B10	G520B20	G520C20	G520D30
98,5 x 14 mm	G522B10	G522B20	G522C20	G522D30
98,5 x 18 mm	G524B10	G524B20	G524C20	G524D30
98,5 x 20 mm	G525B10	G525B20	G525C20	G525D30
98,5 x 25 mm	G526B10	G526B20	G526C20	G526D30

ℹ Consult instructions for use   Pre-colored blanks are not allowed to be used with patented coloring technologies

Not all products are available in every country.

02.
Coloring Liquid & Aesthetic Finish

DD**Basic**Shade

The Classic (previously DD Bio ZX² monolith zero). Optimized for the individual painting technique (stain & glaze), minimal coating (cut back) or as a framework shade for full veneering or the combination of the techniques in one job.

For DD Bio Z, DD Bio ZX², DD cube ONE® and DD cubeX2®

Concept	"one-for-all" color system Primary color, basis for aesthetic characterisation
Color key	VITA® classical (Dentine)
Chroma	Higher chroma – higher grey value
Luminance	Less brightness

ℹ️ Please find the recommendations for the coloring in our instructions for use.

Dentin & Bleach

Available in 16 dentine colors according to VITA® and 3 bleach colors.

Color according to VITA®	Order-no. 30 ml	Order-no. 100 ml
0M1	LBS300M1	LBS1000M1
0M2	LBS300M2	LBS1000M2
0M3	LBS300M3	LBS1000M3
A1	LBS30A1	LBS100A1
A2	LBS30A2	LBS100A2
A3	LBS30A3	LBS100A3
A3,5	LBS30A35	LBS100A35
A4	LBS30A4	LBS100A4
B1	LBS30B1	LBS100B1
B2	LBS30B2	LBS100B2
B3	LBS30B3	LBS100B3
B4	LBS30B4	LBS100B4
C1	LBS30C1	LBS100C1
C2	LBS30C2	LBS100C2
C3	LBS30C3	LBS100C3
C4	LBS30C4	LBS100C4
D2	LBS30D2	LBS100D2
D3	LBS30D3	LBS100D3
D4	LBS30D4	LBS100D4

coloring liquid for use with white dental direkt zirconium milling blanks

Not all products are available in every country.

DD**Pro**Shade**Z**

DD**Pro**Shade**C**

The "Z variants" are optimized for the individual painting technique (stain & glaze), minimal coating (cut back) or as a framework shade for full veneering or the combination of the techniques in one job.

The "C variants" are optimized for the high level of translucency of the DD cube ONE® and DD cubeX²®. Monolithic full ceramic is possible with just glazing. A high aesthetic level and efficient work are combined into one.

For DD Bio Z, DD Bio ZX² and DD cube ONE®

For DD cube ONE® and DD cubeX²®

Concept	Optimised for the material specific translucency High degree of conformity with the color ring
Color key	VITA® classical (Dentine)
Chroma	Less chroma – lower grey value, "more sunny"
Luminance	More brightness

ℹ️ Please find the recommendations for the coloring in our instructions for use.

Dentin & Bleach

Available in 16 dentine colors according to VITA® and 3 bleach colors.

Color according to VITA®	Order-no. 30 ml	Order-no. 100 ml
0M1	LPSZ300M1	LPSZ1000M1
0M2	LPSZ300M2	LPSZ1000M2
0M3	LPSZ300M3	LPSZ1000M3
A1	LPSZ30A1	LPSZ100A1
A2	LPSZ30A2	LPSZ100A2
A3	LPSZ30A3	LPSZ100A3
A3,5	LPSZ30A35	LPSZ100A35
A4	LPSZ30A4	LPSZ100A4
B1	LPSZ30B1	LPSZ100B1
B2	LPSZ30B2	LPSZ100B2
B3	LPSZ30B3	LPSZ100B3
B4	LPSZ30B4	LPSZ100B4
C1	LPSZ30C1	LPSZ100C1
C2	LPSZ30C2	LPSZ100C2
C3	LPSZ30C3	LPSZ100C3
C4	LPSZ30C4	LPSZ100C4
D2	LPSZ30D2	LPSZ100D2
D3	LPSZ30D3	LPSZ100D3
D4	LPSZ30D4	LPSZ100D4

Dentin & Bleach

Available in 16 dentine colors according to VITA® and 3 bleach colors.

Color according to VITA®	Order-no. 30 ml	Order-no. 100 ml
0M1	LPSC300M1	LPSC1000M1
0M2	LPSC300M2	LPSC1000M2
0M3	LPSC300M3	LPSC1000M3
A1	LPSC30A1	LPSC100A1
A2	LPSC30A2	LPSC100A2
A3	LPSC30A3	LPSC100A3
A3,5	LPSC30A35	LPSC100A35
A4	LPSC30A4	LPSC100A4
B1	LPSC30B1	LPSC100B1
B2	LPSC30B2	LPSC100B2
B3	LPSC30B3	LPSC100B3
B4	LPSC30B4	LPSC100B4
C1	LPSC30C1	LPSC100C1
C2	LPSC30C2	LPSC100C2
C3	LPSC30C3	LPSC100C3
C4	LPSC30C4	LPSC100C4
D2	LPSC30D2	LPSC100D2
D3	LPSC30D3	LPSC100D3
D4	LPSC30D4	LPSC100D4

coloring liquid for use with white dental direkt zirconium milling blanks

Not all products are available in every country.

Dental **Direkt**

DD**Art**Elements

universally applicable
with all DD dentine liquids
with all DD zirconium oxide types

Effect colors

Ideal for individualisation, to shade the dentine colors or purely for the characterisation of e.g. fissures, incisal areas or gingival areas.

light pink	purple	blue	yellow	orange
LAE30LP	LAE30P	LAE30B	LAE30Y	LAE30O

light brown	dark brown	light grey	dark grey	graphite
LAE30LB	LAE30DB	LAE30LG	LAE30DG	LAE30G

Incisal colors

For occlusal and incisal individualisation.

Color		Order-no. 15 ml
SA1	for painting (0M3 · A1 · A2 · B1 · B2)	LAE15SA1
SA2	for painting (A3 · A3,5 · A4 · B3 · B4)	LAE15SA2
SC1	for painting (C1 · C2 · D2)	LAE15SC1
SC2	for painting (C3 · C4 · D3 · D4)	LAE15SC2
SO	for painting (0M1 · 0M2) for dipping (all dentine colors)	LAE15SO
SO Bright	for painting (0M1 · 0M2) for dipping (all dentine colors) especially developed for DD cube ONE®	LAE15SOB

Incisal SO (SO Bright especially developed for DD cube ONE®**)**
optimised for efficient dipping technique.
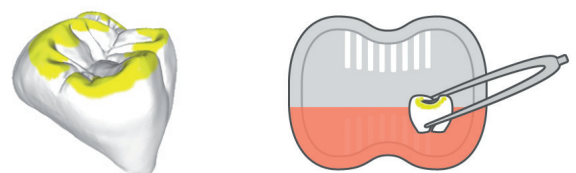
Incisal SA/SC
optimised for individual brush technique.
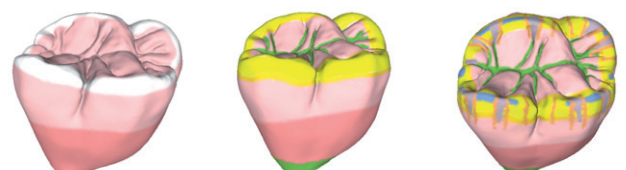
Vario

To brighten the dentine colors.

Article	Order-no. 30 ml
Variation liquid	LAE30V

ℹ Consult instructions for use   coloring liquid for use with white dental direkt zirconium milling blanks

Not all products are available in every country.

DD*Shade*Concept®-Sets

Coloring sets

Coloring sets	Order-no.	Content
DD Basic Shade-Set	LBS001	16 dentine colors A1 – D4 á 30 ml 5 incisal colors SA1 – SO á 15 ml + 40 applicators
DD Pro Shade C-Set (Ideal for DD cubeX²® and DD cube ONE®)	LPSC001	16 dentine colors A1 – D4 á 30 ml 5 incisal colors SA1 – SO á 15 ml + 40 applicators
DD Pro Shade Z-Set (Ideal for DD Bio Z, DD Bio ZX² and DD cube ONE®)	LPSZ001	16 dentine colors A1 – D4 á 30 ml 5 incisal colors SA1 – SO á 15 ml + 40 applicators
DD Art Elements-Set	LAE001	5 incisal colors á 15 ml 10 effect colors á 30 ml 1 vario liquid á 30 ml + 40 applicators

Consult instructions for use

Not all products are available in every country.

panther

The Premium-Finish

Panther starter kit	
Order-no.	TCPSET104/01
Item	1

TCP | M	Panther Flame 055	Panther Lense 260	Panther Wheel 170	Panther Lense 150
Order-no.	TCP100104MSW4Z	TCP140104M	TCP158104MSW4Z	TCP541104MSW4Z
Measure (mm)	Ø 5,5 x 18	Ø 26 x 2	Ø 17 x 2,4	Ø 15 x 1
Shaft	104-HP	104-HP	104-HP	104-HP
↻ Optimal / maximum (min. -1)	12.000 / 20.000	8.000 / 20.000	8.000 / 20.000	8.000 / 20.000
Item	3 pieces	1 pieces	3 pieces	3 pieces

TCP | XF	Panther Flame 055	Panther Lense 260	Panther Wheel 170	Panther Lense 150
Order-no.	TCP100104XFSW4Z	TCP140104XF	TCP158104XFSW4Z	TCP541104XFSW4Z
Measure (mm)	Ø 5,5 x 18	Ø 26 x 2	Ø 17 x 2,4	Ø 15 x 1
Shaft	104-HP	104-HP	104-HP	104-HP
↻ Optimal / maximum (min. -1)	12.000 / 20.000	8.000 / 20.000	8.000 / 20.000	8.000 / 20.000
Item	3 pieces	1 pieces	3 pieces	3 pieces

| Accessories	Diamond polishing paste	Goat's hair brush 17 mm	Goat's hair brush 19 mm
Order-no.	TCPPASTE01/20	TCP417104GR16	TCP419104GR16
Measure (mm)	–	Ø 17	Ø 19
Shaft	–	104-HP	104-HP
↻ Optimal / maximum (min. -1)	–	12.000 / 15.000	12.000 / 15.000
Item	20 g	10 pieces	10 pieces

03.
High Performance Polymers

DD*Bio*Splint P HI *98*

high impact thermoplastic

Your benefits:

- biocompatible – medical thermoplastic, no chemoplastic!
- industrially polymerised – minimal residual monomer content
- high fracture resistance and long-term stability (bruxism treatment)
- lowest water absorption – long-term stability of the fit
- good polishing properties – smooth surfaces are less susceptible to discoloration and plaque deposits, which at the same time minimises the risk of inflammation.

Technical data	
Material	100% Polymethyl methacrylate (PMMA)
Classification	Class IIa according to MDD/MDR
Indication	Bite guard splint, therapeutic splints, bite regulators (Due to its properties, the material is indicated for the oral cavity up to 12 month.)
Color	clear
Flexural strength ISO 178	92 MPa
Charpy impact strength +23°C ISO 179/1eU	45 kJ/m²
Density ISO 1183	1,17 g/cm³
Water absorption ISO 20795-1	0,02 µg/mm³
Solubility ISO 20795-1	0,0 µg/mm³
residual monomer content ISO 20795-1	< 0,7 %
CAM system	open systems for Ø 98,5 mm blanks

ø98,5
ø94
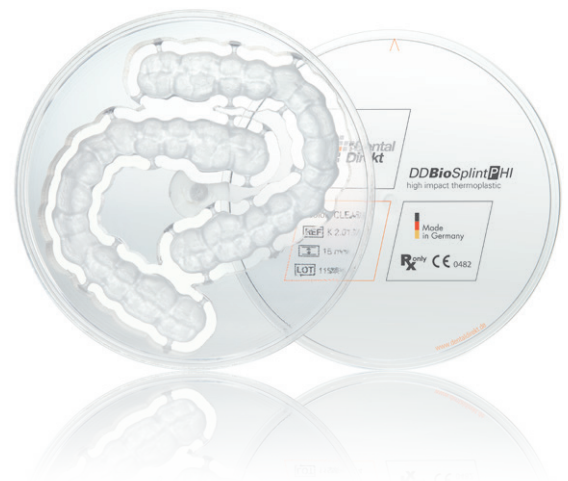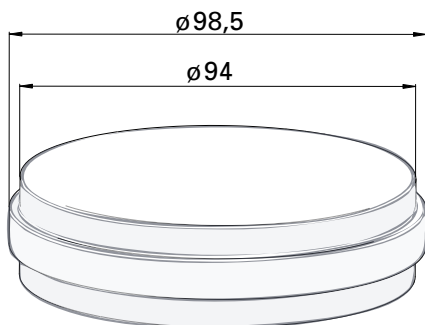
Hight	Order-no.
15 mm	K40115
20 mm	K40120
25 mm	K40125

Consult instructions for use

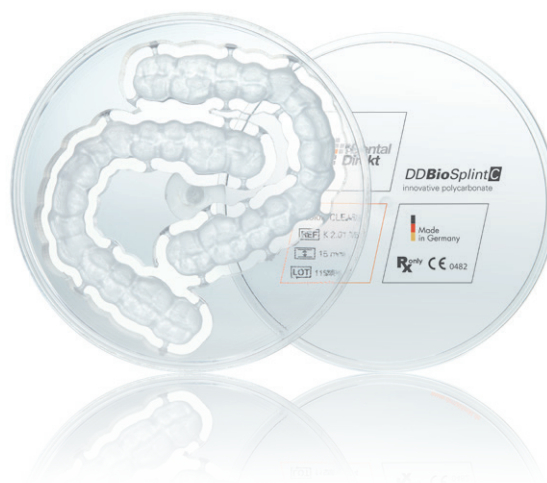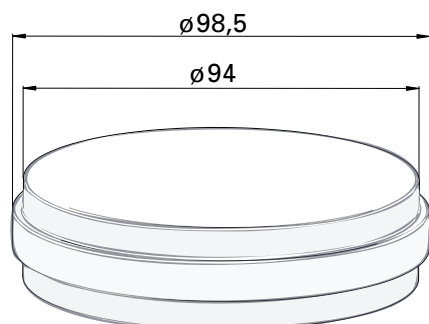Not all products are available in every country.

DD*Bio*Splint C98

innovative polycarbonate

Your benefits:

- biocompatible – medical thermoplastic, no chemoplastic!
- industrially polymerised–absolutely low residual monomer content
- high fracture resistance and continuous flexural load (treatment of bruxism)
- plaque resistant–lowest water absorption – dense structure
- good polishing properties
- shatterproof with added elasticity, (high) resilience

Technical data	
Material	100% Polycarbonate (PC)
Classification	Class I according to MDD/MDR
Indication	Bite guard splint, therapeutic splints, bite regulators, drilling templates (Due to its properties, the material is indicated for the oral cavity up to 30 days.)
Farbe	clear/slightly bluish
Flexural strength ISO 20795-1	≥ 98 MPa
Flexural modulus ISO 20795-1	> 2.300 MPa
Water absorption ISO 20795-1	3,6 µg/mm³
Solubility ISO 20795-1	0,2 µg/mm³
residual monomer content ISO 20795-1	≤ 0,0015 %
CAM system	open systems for Ø 98,5 mm blanks

Hight	Order-no.
15 mm	K 2.01.15
20 mm	K 2.01.20

Consult instructions for use
Not all products are available in every country.

DDtemp MED 98

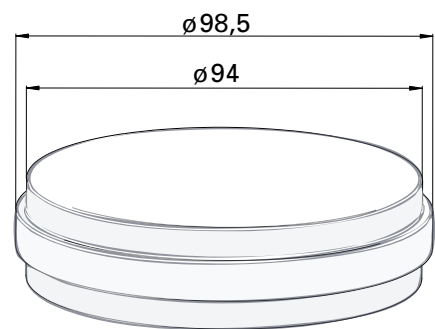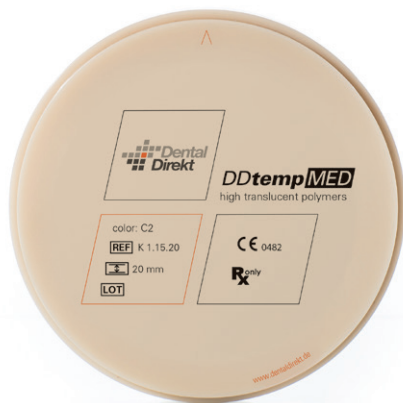## high translucent polymers

MONO CHROME

Acrylic Polymer

DD temp MED blanks consist of thermoplastic acrylic polymer based on polymethyl methacrylate (PMMA), with no toxic or allergenic materials.

Your benefits:

- biocompatible – medical polymer material
- industrially polymerised–absolutely low residual monomer content
- high fracture resistance and continuous flexural load
- plaque resistant – lowest water absorption – dense structure
- good polishing properties
- CAM-optimised hardness (23 HV1) for good machinability

Technical data	
Material	Polymethyl methacrylate (PMMA)
Classification	Class IIa according to MDD/MDR
Indication	pre-colored dental milling blanks for the production of temporary crowns and bridges (Due to its properties, the material is indicated for the oral cavity up to 12 month.)
Flexural strength ISO 20795-1	~ 78 MPa
Flexural modulus ISO 20795-1	~ 2.988 MPa
Water absorption ISO 20795-1	19 – 25 µg/mm³
Solubility ISO 20795-1	0,3 – 0,7 µg/mm³
residual monomer content ISO 20795-1	0,02 %
CAM system	open systems for Ø 98,5 mm blanks

Chemical Composition [Weight %]	
Polymethyl methacrylate (PMMA)	> 99,8
Coloring pigments	≤ 0,2

ø 98,5
ø 94

Hight	A1	A2	A3	A3,5	B2	C2	D3
15 mm	K 1.16.15	K 1.10.15	K 1.11.15	K 1.12.15	K 1.13.15	K 1.15.15	K 1.14.15
20 mm	K 1.16.20	K 1.10.20	K 1.11.20	K 1.12.20	K 1.13.20	K 1.15.20	K 1.14.20

Consult instructions for use
Not all products are available in every country.

DD*poly*X ML 98

multilayer – natural colored polymers
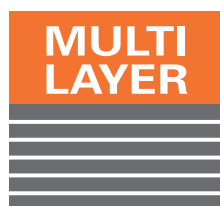
MULTI LAYER

Acrylic Polymer

DD poly X ML blanks consist of multilayer acrylic polymer based on polymethyl methacrylate (PMMA) without toxic or allergenic materials (according to ISO 10993-5).

Your benefits:

- 5 layers polymerized – very natural aesthetic effect
- biocompatible – medical polymer material
- industrially polymerised – low residual monomer content
- high fracture resistance and continuous flexural load
- plaque resistant – low water absorption – dense structure
- good polishing properties and abrasion resistance

Technical data	
Material	Polymethyl methacrylate (PMMA)
Classification	Class IIa according to MDD/MDR
Indication	suitable for making removable or temporary dental structures such as crowns and bridges (For temporary restaurations, the material is indicated for the oral cavity up to 12 month.)
Flexural strength ISO 10477	90 MPa
Flexural modulus ISO 20795-1	2.300 MPa
Water absorption ISO 10477	25 µg/mm³
Solubility ISO 10477	0,0 µg/mm³
residual monomer content ISO 20795-1	< 2 %
CAM system	open systems for Ø 98,5 mm blanks

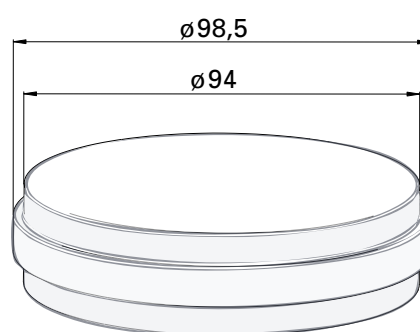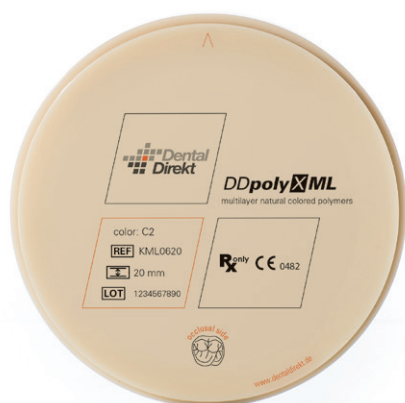| Chemical Composition [Weight %]	
Polymethyl methacrylate (PMMA)	> 99
Coloring pigments	< 1

ø98,5
ø94

Hight	A1	A2	A3	B0	B3	C2
16 mm	KML0116	KML0216	KML0316	KML0416	KML0516	KML0616
20 mm	KML0120	KML0220	KML0320	KML0420	KML0520	KML0620

ℹ️ Consult instructions for use
Not all products are available in every country.

Dental Direkt

DDpeek MED 98

the polymer steel

Medical PEEK

DD peek MED is the ideal combination of biocompatibility and ultimate strength.

Polyether ether ketone (PEEK) has a modulus of elasticity similar to human bone and is thus extremely wear-resistant. These attributes have made it a highly sought-after material in surgical endoprosthetics. Compared with titanium implants, stress peaks at the interface to the bones are reduced. Dental constructions also benefit from this property. This reduces the load on screw and adhesive bonds of the dental prosthesis as well. An ideal material for heavily load-bearing indications. Its total biocompatibility underscores the material through its inert property against body fluids.

Your benefits:

- Monomer-free
- Extremely loadable and wear-resistant
- Low density - very light
- Adheres with PMMA
- Suitable for allergy patients
- Outstanding sliding qualities (telescopes)

Technical data	
Material	Polyether ether ketone (PEEK)
Classification	Class IIa according to MDD/MDR
Indication	e.g. abutments and cervical gingival formers, bar constructions, tertiary constructions, telescope crowns, transversal links (due to its properties, the material is indicated for permanent use in the oral cavity) For the manufacture of fixed or removable dental framework constructions for long-term use.
Flexural strength ISO 20795-1	≥ 155 MPa
Flexual modulus* ISO 20795-1	≥ 3,8 GPa
Densitiy* ISO 1183	1,5 g/cm³
Water absorption ISO 20795-1	0,0 µg/mm³
Solubility ISO 20795-1	0,0 µg/mm³
CAM system	open systems for Ø 98,5 mm blanks

*Value determination based on DD peek MED natural

Chemical Composition [Weight %]				
	Natural	White	Dentine	Gingiva
Polyether ether ketone (PEEK)	≥ 99,99	≥ 80	≥ 80	> 90
Titanium oxide	–	< 20	< 20	< 5
Further Additives	< 0,01	< 0,1	< 1	< 1

Hight	white	dentine	natural	gingiva
14 mm	K 3.01.14	K 3.02.14	K 3.03.14	K 3.04.14
18 mm	K 3.01.18	K 3.02.18	K 3.03.18	K 3.04.18
23 mm	K 3.01.23	K 3.02.23	K 3.03.23	K 3.04.23

ℹ️ Consult instructions for use
Not all products are available in every country.

04.
More
Materials

DD**Bio**CW

Milling blank based on CoCr

The DD Bio CW Blanks provide a high level of working safety and guarantees reliably good quality. The DD Bio CW blank is resistant to corrosion, biocompatible and free of nickel and beryllium. Outstanding aesthetic results can be achieved by a veneering with a material-specific veneering ceramic. The adherence oxide formers provide an optimal bond between metal and ceramic.

The DD Bio CW blank has been treated with a special heat treatment, which makes the alloy easy to machine and gives it outstanding properties due to a uniform microstructure.

Technical data	
Density	8,8 g/cm³
E modulus	250 GPa
CTE (25 – 500°C)	14,4 10^{-6} K^{-1}
Vickers hardness	350 HV10
Elongation at break	9 %
CAM system	open systems for Ø 98,5 mm blanks

Chemical composition [Weight %]	
Co	63
Cr	29
Mo	6
Nb, Si, Mn, Fe	< 1
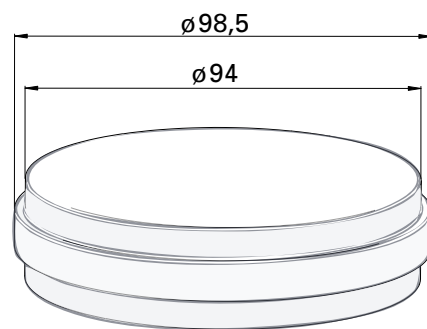
Hight	Order-no.
8 mm	G 900
10 mm	G 901
12 mm	G 902
13,5 mm	G 903
15 mm	G 904
18 mm	G 905

Consult instructions for use

Not all products are available in every country.

DD*cam*WAX*98*

Wax for casting technique

Synthetic wax blanks utilised for the production of combustible wax frameworks that leave no residue. DD CAM wax blanks are distinguished by excellent milling properties and form a fine chip during the machining that does not clog milling cutters (non-medical product).

Specification	
CAM system	open systems for Ø 98,5 mm blanks

Hight	Order-no.	Color
20 mm	G 529	grey

DD*calibration*disc

The DD calibration disc made of Polyurethane is used to calibrate your milling machine. After milling a special calibration body, you measure them and enter these values into the program. The milling machine will guide you through the calibration process step by step (non-medical product).

Specification	
CAM system	open systems for Ø 98,5 mm blanks

Hight	Order-no.	Color
15 mm	G 944	brown

Consult instructions for use

Not all products are available in every country.

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