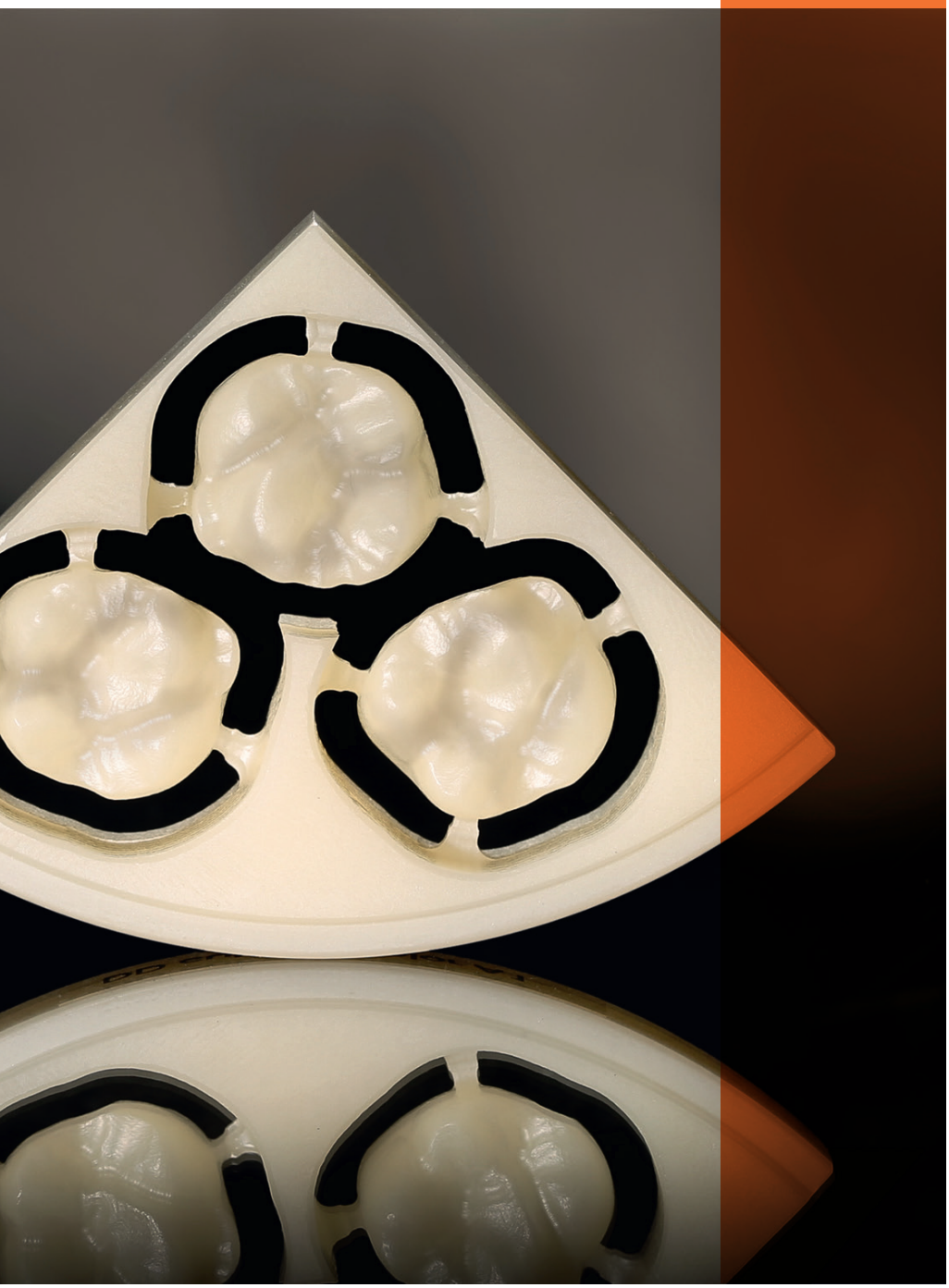
EN

VITA

Exclusive Distributor for USA & Canada



Product catalog

CAD/CAM Materials

CLOSE TO YOU

Dental Direkt

Content

High Performance Ceramics

01

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.%]

	DD Bio Z (color) 3Y-TZP-A	DD Bio ZX² (color) 3Y-TZP-LA	DD cube ONE® (ML) 4Y-TZP	Nacera® Pearl Natural 6Y-PSZ + 3Y-TZP	DD cubeX²® (ML) 5Y-TZP
$ZrO_2 + HfO_2 + Y_2O_3$	≥ 99,0	≥ 99,0	≥ 99,0	≥ 99,0	≥ 99,0
Y_2O_3	< 6	< 6	< 8	< 10	< 10
Al_2O_3	< 0,5	≤ 0,15	< 0,15	0,10	≤ 0,01
Other oxides	< 1	< 1	< 1	< 1	< 1

	Bio Z color 3Y-TZP-A	DD Bio ZX² color 3Y-TZP-LA	DD cube ONE® ML 4Y-TZP	Nacera® Pearl Natural 6Y-PSZ + 3Y-TZP	DD cubeX²® 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	Fe_2O_3 | Er_2O_3 | MnO_2
Colors	in 8 VITA® shades + 5 Universal shades	in 16 VITA® shades + 5 Universal shades	in 16 VITA® shades + 1 Bleach shade	in 16 VITA®-Farben + 3 Bleach shades	in 16 VITA® shades + 1 Bleach shade

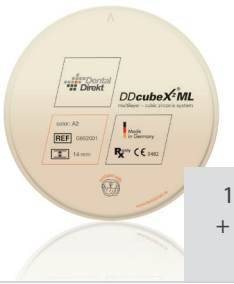
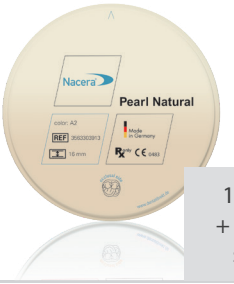
Multi Additive Technology®– more than just color

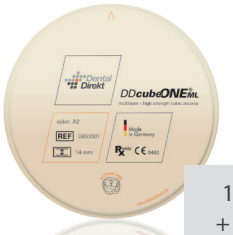
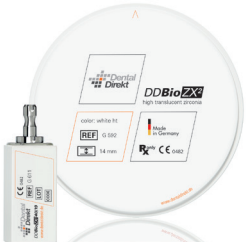
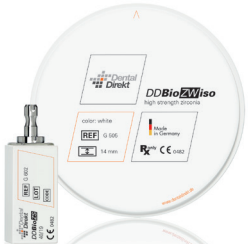
We achieve brilliant color effects by adding selected ions of rare soils or transition metals into the zirconium matrix. Our balanced ion formulation and the homogeneous distribution in the zirconia structure is what we call Multi Additive Technology®. It is the key to excellent optical characteristics.

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

VITA Dental Direkt

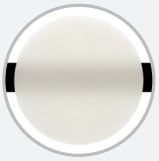
All zirconia you need

	Super High Translucent (5Y-TZP)	Super High Translucent (6Y-PSZ) High Translucent (3Y-TZP)
MULTI LAYER	DDcubeX²ML  16 VITA®- + 1 Bleach shade	Nacera Pearl Natural  16 VITA®- + 3 Bleach shades
MONO CHROME		
WHITE	DDcubeX² 	
Dentine Liquids	DDProShade C DDBasicShade	

High Translucent Plus (4Y-TZP)	High Translucent (3Y-TZP-LA)	High Strength (3Y-TZP-A)
DDcubeONE®ML  16 VITA®- + 1 Bleach shade		
	DDBioZX²color  16 VITA®- + 5 Universal shades	
DDcubeONE® 	DDBioZX² 	DDBioZ 
DDProShadeZ DDBasicShade	DDProShadeZ DDBasicShade	DDProShadeZ DDBasicShade

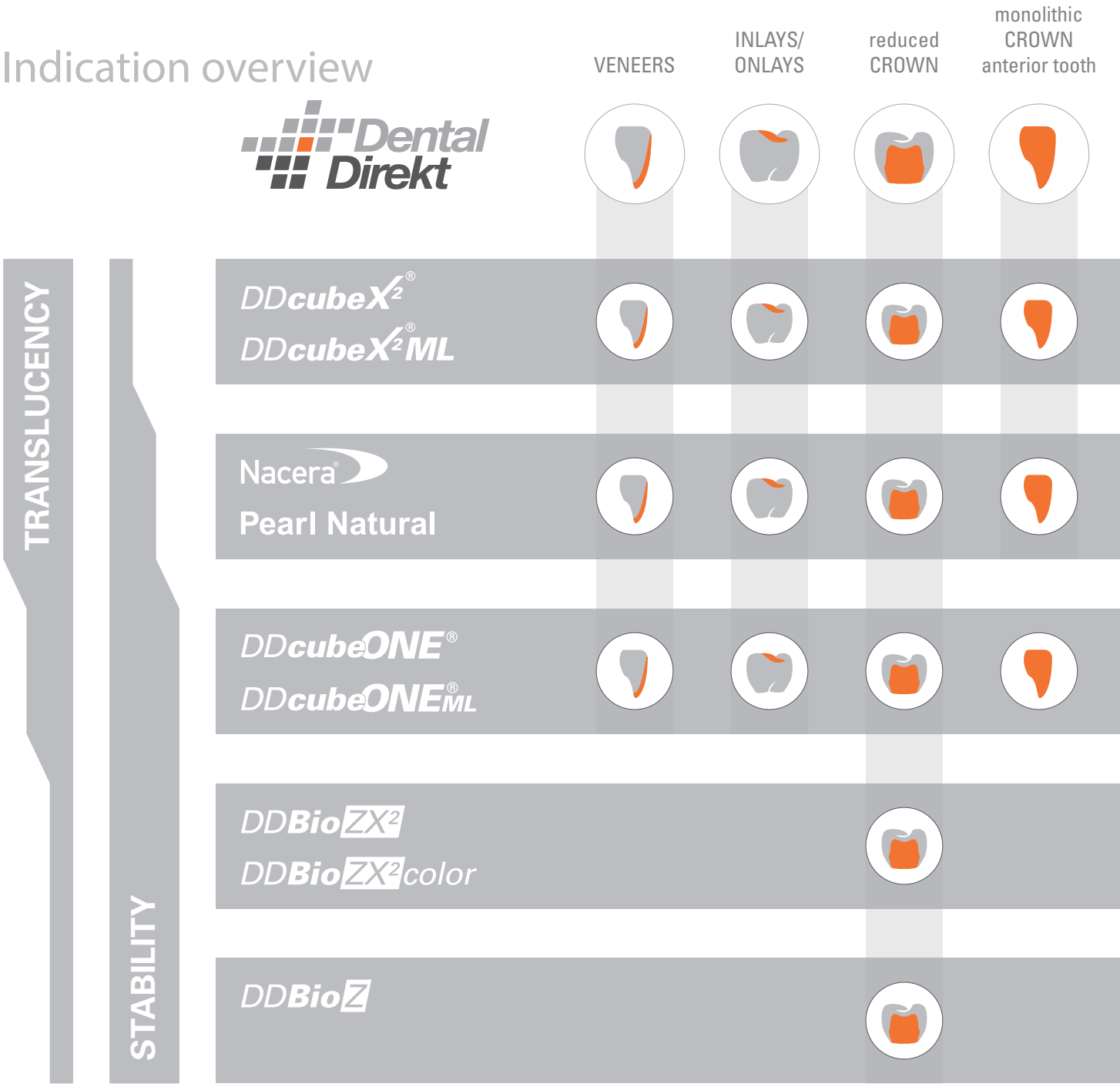
Aesthetics overview

Generation	Multilayer	
	16 VITA® - + 1 Bleach shade	16 VITA® - + 3 Bleach shade
	type II, class 4, ≤ 3 units	type II, class 5, ≥ 4 units
	DDcubeX²ML	Nacera® Pearl Natural
Strength	700 (±100) MPa*	1.000 MPa* – incisal 1.200 MPa* – cervical
Translucency	Super High Translucent (5Y-TZP)	Super High Translucent (6Y-PSZ) High Translucent (3Y-TZP)
Masking	slight stump discoloration	medium stump discoloration
Aesthetics	aesthetic-line yellow-warm	aesthetic-line blue-cold
Processing	automated	

	Monochrome	
16 VITA® - + 1 Bleach shade	16 VITA® - + 5 Universal shades	8 VITA® - + 5 Universal shades
type II, class 5, ≥ 4 units	type II, class 5, ≥ 4 units	type II, class 5, ≥ 4 units
		
1.200 (±150) MPa*	1.150 (±150) MPa*	1.150 (±200) MPa*
		
High Translucent Plus (4Y-TZP)	High Translucent (3Y-TZP-LA)	High Strength (3Y-TZP-A)
		strong stump discoloration 
aesthetic-line yellow-warm	aesthetic-line yellow-warm	aesthetic-line yellow-warm
		
		manual

*** ISO 6872**

Indication overview



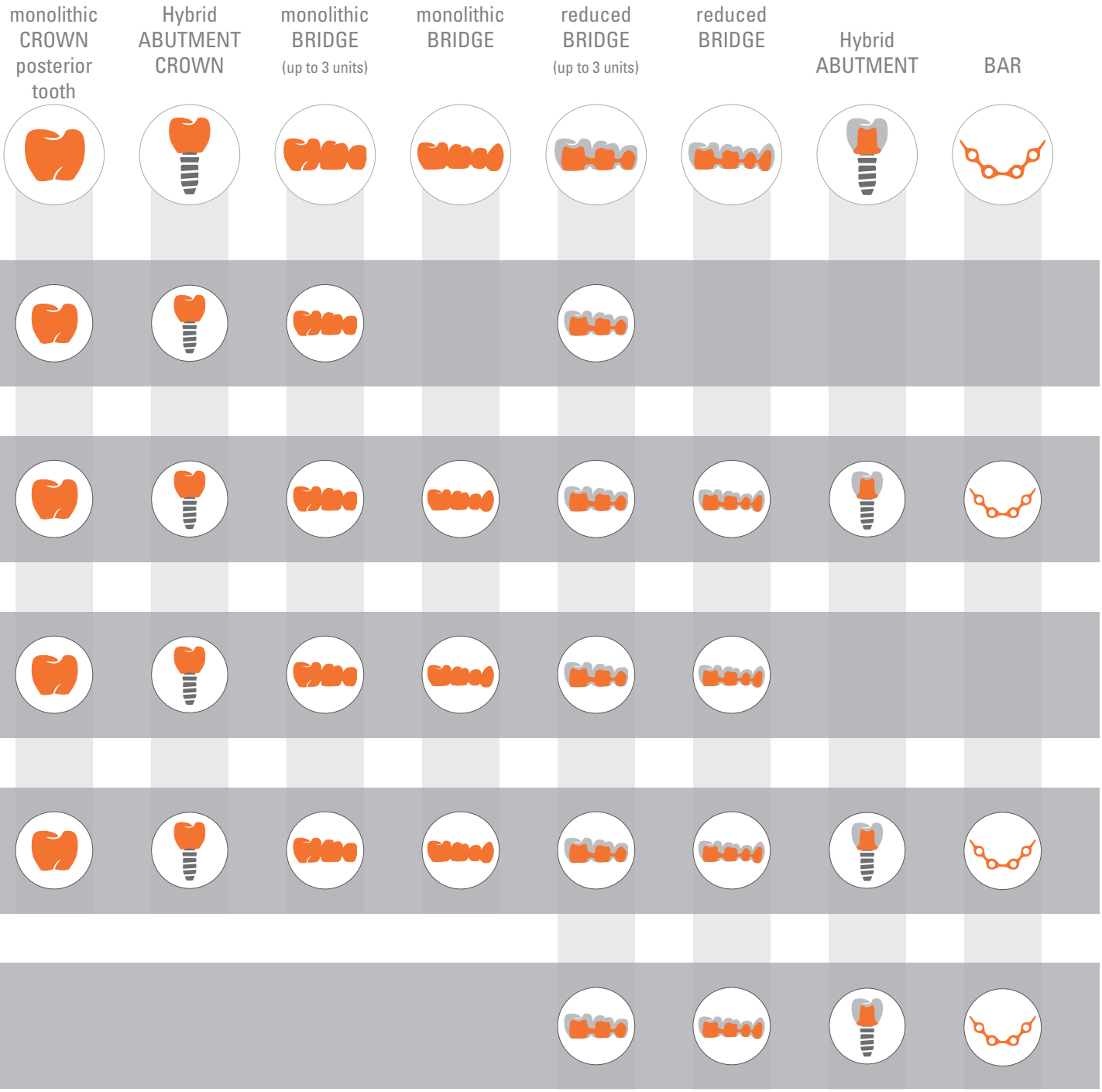
*An individual selection of the appropriate material is necessary to ensure the best possible restoration.

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 prepared tooth. 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. There is a direct context between the underlying tooth structure, the wall thickness and the resulting shade effect of the restoration.



Indication guide_DD medical zirconia_Rev.07_2022/08

In case of a significantly discolored stump and preparation with low substance removal a more opaque zirconia (DD Bio ZX^2, DD Bio Z) could be used to cover up the underlying structure.

Especially when working with a high translucent plus (DD cube ONE®) or super high translucent (DD cube X®) 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 final shade of a restoration.

DDcubeX²®

cubic zirconia system

Super High Translucent (5Y-TZP)

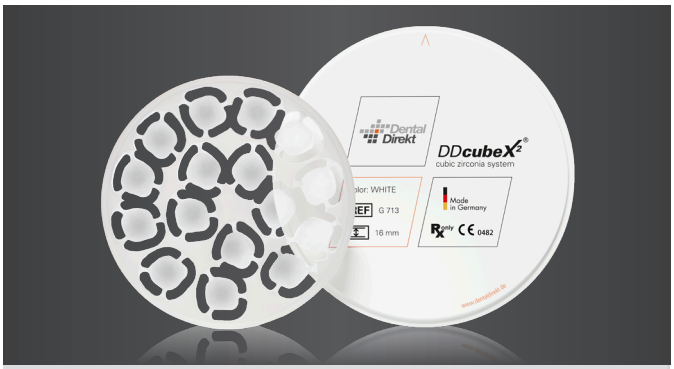
WHITE

Benefits

- More stable than lithium disilicate with comparable aesthetics
- Our favorite for the anterior region

Perfectly suitable for

- High aesthetic monolithic crowns and bridges (up to 3 units)
- 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
Color	White
Aesthetics	Super High Translucent
Sintering temperature	1.450 °C
Flexural strength	700 (±100) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade C DD Basic Shade DD Art Elements
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDcubeX²® ML

multilayer – cubic zirconia system

Super High Translucent (5Y-TZP)

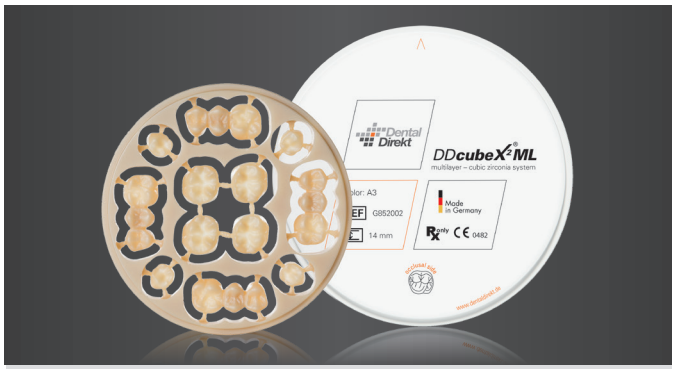
MULTI LAYER

Benefits

- More stable than lithium disilicate with comparable aesthetics
- Our favorite for the anterior region in 16 VITA®- + 1 Bleach shade
- Incisal layer and dentine layer + 2 transition layers = natural color gradient

Perfectly suitable for

- High aesthetic monolithic crowns and bridges (up to 3 units)
- 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
Color	Precolored acc. to VITA®
Aesthetics	Super High Translucent
Sintering temperature	1.450 °C
Flexural strength	700 (±100) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
Multi Additive Technology®	Reliable reproduction of color via industrial coloring
DD Coloring liquids	DD Art Elements
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

Nacera® Pearl Natural

Super High Translucent (6Y-PSZ)
High Translucent (3Y-TZP)

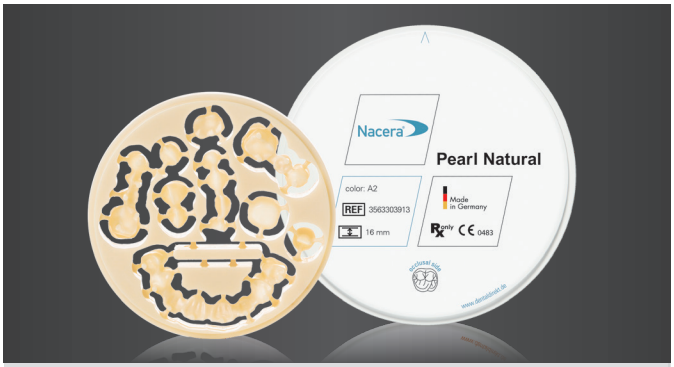
MULTI LAYER

Benefits

- Naturally soft color and translucency transitions for lifelike looking monolithic restorations
- Highest precision due to distortion-free material
- High process reliability during processing – uncritical positioning during nesting
- Fast and cost-effective for natural-looking monolithic restorations

Perfectly suitable for

- All indications: from monolithic single crowns to complex superstructures for the anterior and posterior region



Technical data	
Type	6Y-PSZ + 3Y-TZP
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	Type II, class 5 – all dental constructions, bridges with max. 2 connected pontics
Color	Precolored acc. to VITA®
Aesthetics	incisal: Super High Translucent cervical: High Translucent
Sintering temperature	1.500 °C
Flexural strength	incisal: 1000 MPa* cervical: 1200 MPa*
CAM system	Open systems for Ø 98,5 mm blanks

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDcubeONE®

high strength – cubic zirconia system

High Translucent Plus (4Y-TZP)

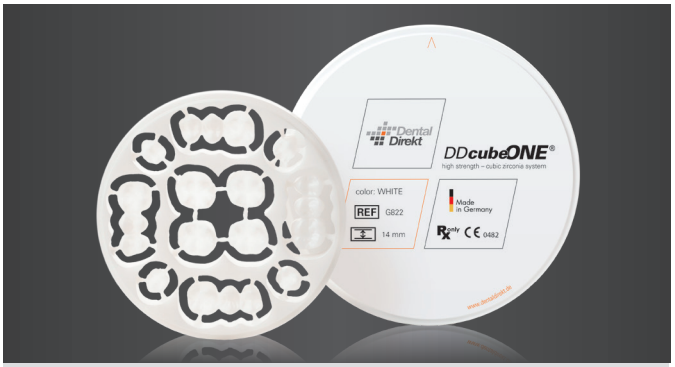
WHITE

Benefits

- Multi-indicative universal zirconia
- Ideal balance of stability and aesthetics
- Extremely high fracture toughness

Perfectly suitable for

- High aesthetic monolithic crowns and bridges
- Especially for monolithic anterior restorations
- 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, bridges with max. 2 connected pontics
Color	White
Aesthetics	High Translucent Plus
Sintering temperature	1.450 °C
Flexural strength	1.200 (±150) MP*
CAM system	Open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDcubeONE® ML

multilayer – high strength cubic zirconia

High Translucent Plus (4Y-TZP)

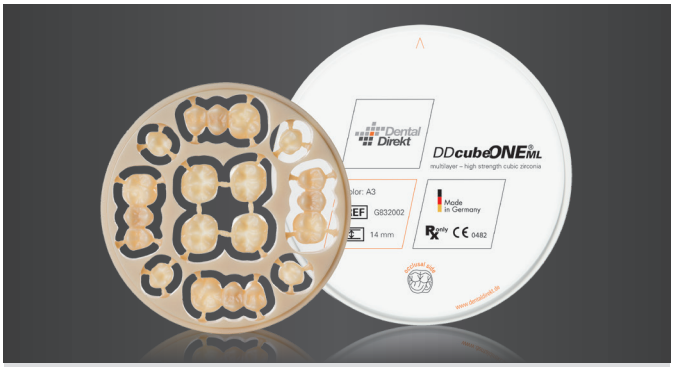
MULTI LAYER

Benefits

- Multi-indicative universal zirconia in 16 VITA®- + 1 Bleach shade
- Incisal layer and dentine layer + 2 transition layers = natural color gradient
- Ideal balance of stability and aesthetics

Perfectly suitable for

- High aesthetic monolithic crowns and bridges
- Especially for monolithic anterior restorations
- 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, bridges with max. 2 connected pontics
Color	Precolored acc. to VITA®
Aesthetics	High Translucent Plus
Sintering temperature	1.450 °C
Flexural strength	1.200 (±150) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
Multi Additive Technology®	Reliable reproduction of color via industrial coloring
DD Coloring liquids	DD Art Elements DD Incisal X
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDBioZX²

high translucent zirconia

High Translucent (3Y-TZP-LA)

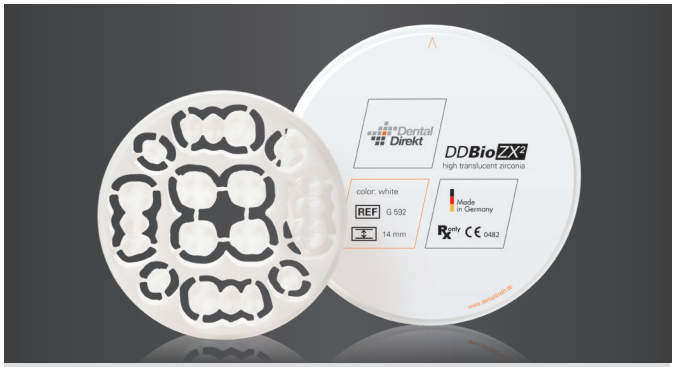
WHITE

Benefits

- Further development of the ‘classic‘ zirconia
- High strength
- High fracture toughness

Perfectly suitable for

- Monolithic crowns and bridges (of any span range)
- Especially for monolithic bridges
- 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, bridges with max. 2 connected pontics
Color	White
Aesthetics	High Translucent
Sintering temperature	1.450 °C
Flexural strength	1.150 (±150) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDBioZX²color

natural chroma – high translucent zirconia

High Translucent (3Y-TZP-LA)

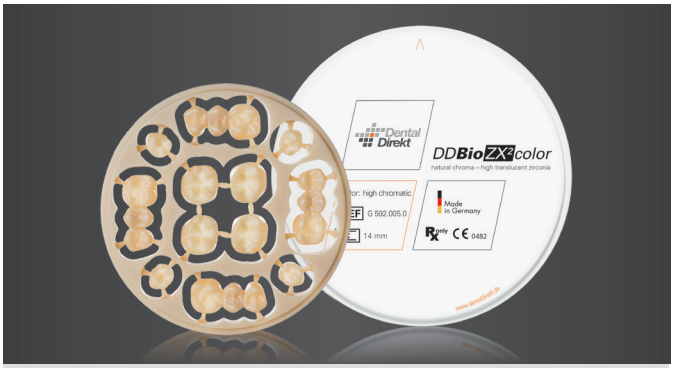
MONO CHROME

Benefits

- Further development of the ‘classic‘ zirconia in 5 universal shades
- High strength
- High fracture toughness

Perfectly suitable for

- Monolithic crowns and bridges (of any span range)
- Especially for monolithic bridges
- 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, bridges with max. 2 connected pontics
Color	5 universal colors
Aesthetics	High Translucent
Sintering temperature	1.450 °C
Flexural strength	1.150 (±150) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
Multi Additive Technology®	Reliable reproduction of color via industrial coloring
DD Coloring liquids	DD Art Elements DD Incisal X
Aesthetic Finish	DD contrast®

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

DDBioZWiso

high strength zirconia

High Strength (3Y-TZP-A)

WHITE

Benefits

- The ‘classic‘ among the zirconium oxides
- High strength
- Opaque – ideal for masking
- Very good dyeability

Perfectly suitable for

- Aesthetic veneering of crowns, bridges
- Hybrid abutments

Technical data	
Type	3Y-TZP-A
Classification	Class IIa according to MDD/MDR
Indication ISO 6872	Type II, class 5 – all dental constructions, bridges with max. 2 connected pontics
Color	White
Aesthetics	Opaque
Sintering temperature	1.450 °C
Flexural strength	1.150 (±200) MPa*
CAM system	Open systems for Ø 98,5 mm blanks
DD Coloring liquids	DD Pro Shade Z DD Basic Shade DD Art Elements

* measured according to DIN EN ISO 6872

Measurements, SKUs, and prices available upon request.

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

VITA Dental Direkt

Coloring Liquids

02

Liquid recommendation

exemplified by the shade reference
VITA® A2

DDBasicShade
Universal Dentine Liquid

DDBioZ

more grayish

DDBioZX²

more grayish

DDcubeONE®

more grayish

DDcubeX²®

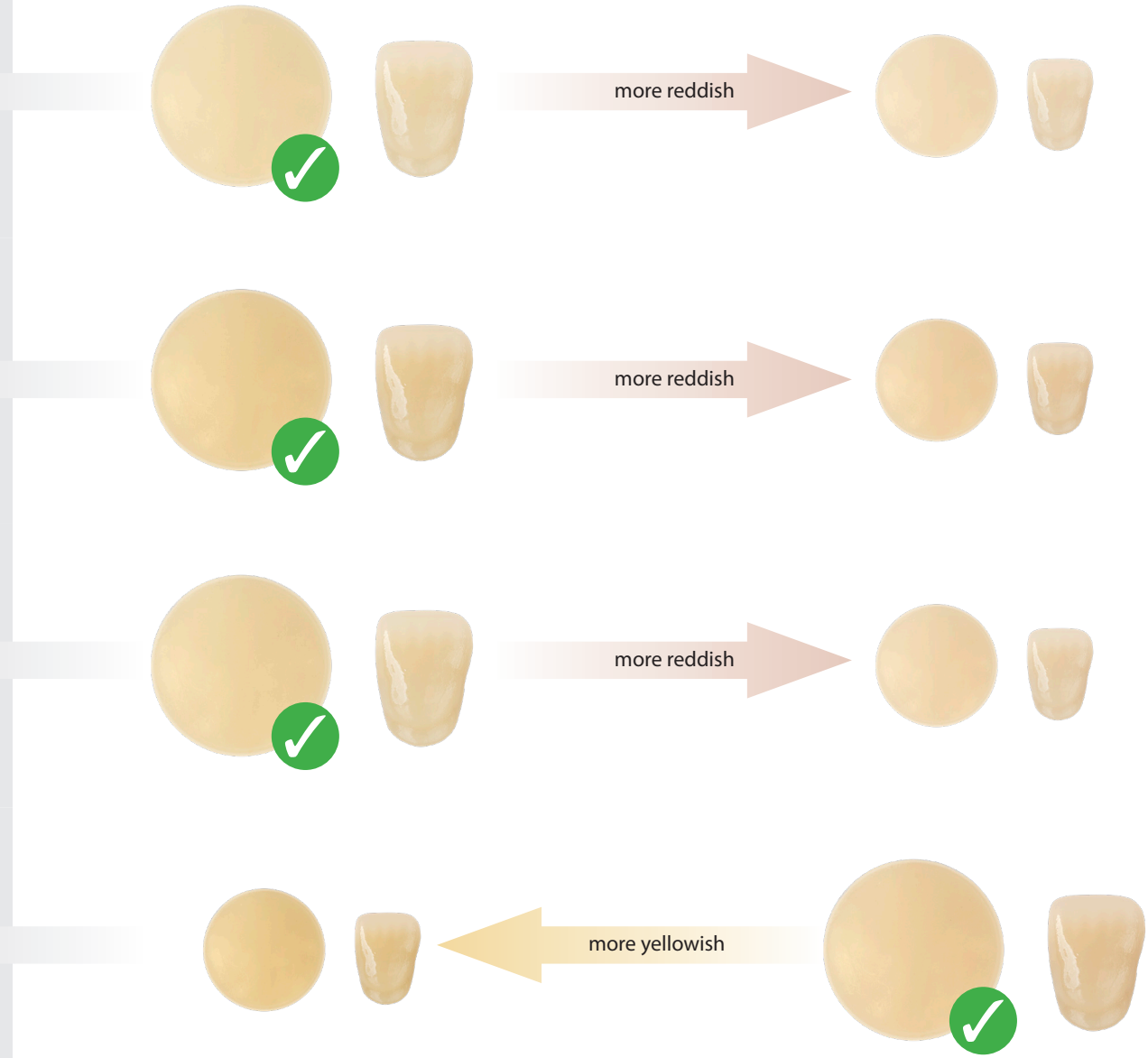
more grayish

Recommendation

Color concept: (shade/color saturation)	intensive chroma, higher gray value
Brightness:	LESS brightness
DD recommendation:	minimum layering (cut back), full veneering, combination of both techniques

DDProShadeZ
Special Dentine Liquid

DDProShadeC
Special Dentine Liquid



Color concept: (shade/color saturation)	less intensive chroma, warmer shade
Brightness:	MORE brightness
DD recommendation:	Basic coloring with the recommended DD Pro Shade.
	Further characterization: For monolithic crowns/bridges made of DD cubeX²® or DD cube ONE® an individual coloring (DD contrast® color and form concept) or minimal layering (cut back). For constructions made of DD Bio ZX² or DD Bio Z a ceramic veneer.

Rev. 03_2022/05

DDBasicShade

Universal Dentine Liquid

DD Basic Shade is a universal coloring liquid for all non-pre-shaded Dental Direkt zirconia types. DD Basic Shade is used before the sintering process.

Shade guide	VITA® classical (dentine)
Color concept	Intensive chroma – higher gray value
Brightness	Less brightness

Recommended for

- DD Bio Z (3Y-TZP-A) — High Strength
- DD Bio ZX² (3Y-TZP-LA) — High Translucent
- DD cube ONE® (4Y-TZP) — High Translucent Plus
- DD cubeX²® (5Y-TZP) — Super High Translucent

Recommended use

- Color basis for minimal layering (cut back)
- Color basis for full veneering
- Combination of both techniques

Measurements, SKUs, and prices available upon request.

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

DDProShadeZ

Special Dentine Liquid

DD Pro Shade Z is a specially developed coloring liquid for the non-pre-shaded high-strength and high translucent zirconia types. DD Pro Shade Z is used before the sintering process.

Shade guide	VITA® classical (dentine)
Color concept	Less intensive chroma – warmer shade
Brightness	More brightness

Recommended for

■ DD Bio Z (3Y-TZP-A)	High Strength
■ DD Bio ZX² (3Y-TZP-LA)	High Translucent
■ DD cube ONE® (4Y-TZP)	High Translucent Plus

Recommended use

- Perfect color base for monolithic crowns and bridges made of DD cube ONE® (DD contrast® color and form concept)
- Color basis for minimal layering (cut back)

Measurements, SKUs, and prices available upon request.

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

DDProShadeC

Special Dentine Liquid

DD Pro Shade C is a specially developed coloring liquid for the cubic non-pre-shaded zirconia DD cubeX®. DD Pro Shade C is used before the sintering process.

Shade guide	VITA® classical (dentine)
Color concept	Less intensive chroma – warmer shade
Brightness	More brightness

Recommended for

- DD cubeX²® (5Y-TZP) Super High Translucent

Recommended use

- Perfect color base for monolithic crowns and bridges made of DD cubeX²® (DD contrast® color and form concept)
- Color basis for minimal layering (cut back)

Measurements, SKUs, and prices available upon request.

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

DD*Art*Elements

Recommended for

- DD Bio Z/color (3Y-TZP-A) — High Strength
- DD Bio ZX²/color (3Y-TZP-LA) — High Translucent
- DD cube ONE®/ML (4Y-TZP) — High Translucent Plus
- DD cubeX²®/ML (5Y-TZP) — Super High Translucent

To be used with all DD Dentine Liquids.

Effect colors

For individualisation, to shade the dentine colors, or simply for the characterization of e.g. fissures, incisal areas or gingival areas.

light pink	purple	blue	yellow	orange

light brown	dark brown	light grey	dark grey	graphite

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

DDShadeConcept® sets

Coloring sets	Content
DD Basic Shade set	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®)	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®)	16 dentine colors A1 – D4 á 30 ml 5 incisal colors SA1 – SO á 15 ml + 40 applicators
DD Art Elements set	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.

High Performance Polymers

03

DDBioSplintPHI

high impact thermoplastic

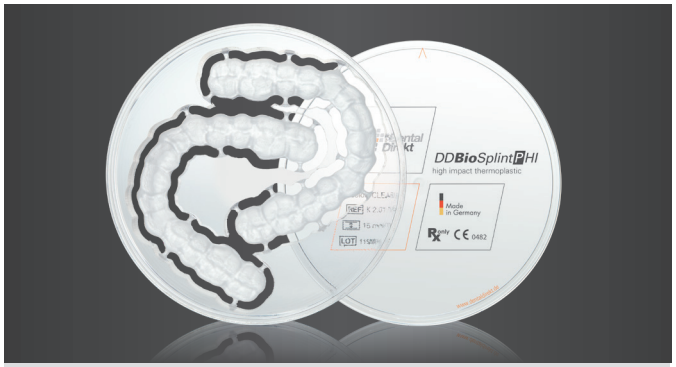
Polymethylmethacrylate (PMMA)

PMMA for occlusal splints

DD Bio Splint P HI blanks consist of thermoplastic acrylic polymer based on polymethylmethacrylate (PMMA). Using CAD/CAM technology, you will achieve a perfect fit with no re-machining.

Benefits

- Biocompatible – medical thermoplastic
- High stability due to high impact modification
- Very good polishing properties – smooth surfaces are less susceptible to discoloration and plaque deposits, which at the same time minimizes the risk of inflammation.
- Possible to bond to conventional polymers
- Bisphenol A free



Technical data	
Material	100% Polymethylmethacrylate (PMMA)
Classification	Class IIa according to MDD/MDR
Indication	Splints, therapeutic splints, bite regulators (indicated for the long-term use in the oral cavity)
Color	clear
Flexural strength ISO 20795-1	65 MPa
Flexural modulus ISO 20795-1	≥ 2020 MPa
Fracture toughness ISO 20795-1	2,1 MPa $m^{1/2}$
Water absorption ISO 20795-1	0,02 µg/mm^3
Solubility ISO 20795-1	0,0 µg/mm^3
Residual monomer ISO 20795-1	< 0,7 %
CAM system	open systems for Ø 98,5 mm blanks

Measurements, SKUs, and prices available upon request.

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

VITA

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