

Anterior translucent zirconia



DDcubeX²[®]
cubic zirconia system

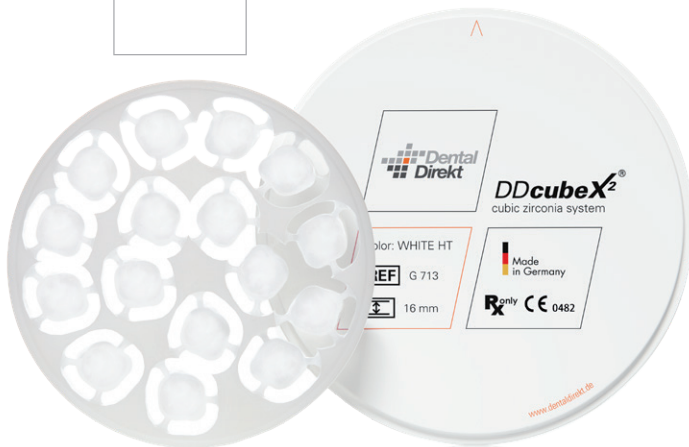


cubic zirconia system
Aesthetic high performance ceramics

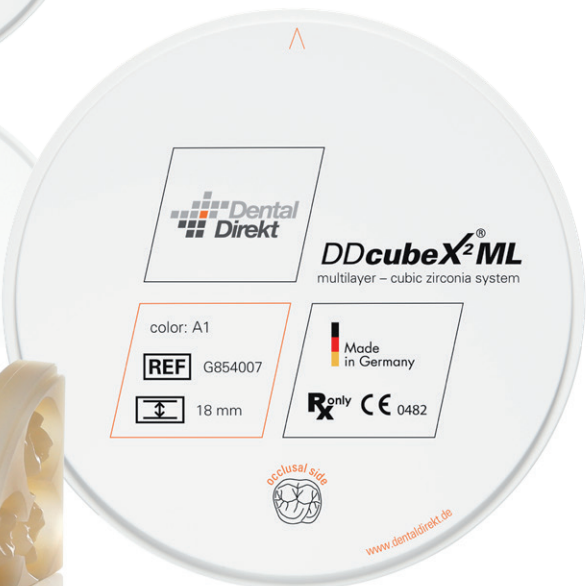
DDcubeX²[®]

cubic zirconia system

WHITE



MULTI
LAYER



Anterior **TRANSLUCENT** zirconia

Strong and beautiful

49% Translucency*

*measured by means of a spectrophotometer on 1 mm thick, polished samples



DDcubeX²

lithium disilicate

DD cubeX²® is a third generation zirconium dioxide (5Y-TZP) and creates the foundation for the “cubic zirconia system”® product family. A hybrid cubic/tetragonal crystal structure is the key to outstanding aesthetics as known from lithium disilicate. At the same time and superior to glass ceramics, DD cubeX²® shows zirconia typical stability and fracture toughness. In doing so, DD cubeX²® takes a unique position among the all-ceramic systems.

DDcubeX²[®]

cubic zirconia system

SHT

Super high translucent
(1mm thick)

49% (white)
up to 49% (ML)

Type and Indication
(acc. to ISO 6872)

type II, class 4



≤ 3 units

Strength

> 750 MPa (white)

> 800 MPa (ML)

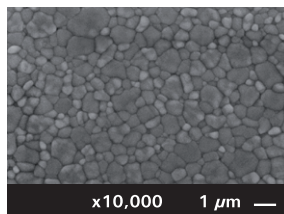
Cubic crystals

~ 50%

Tetragonal crystals

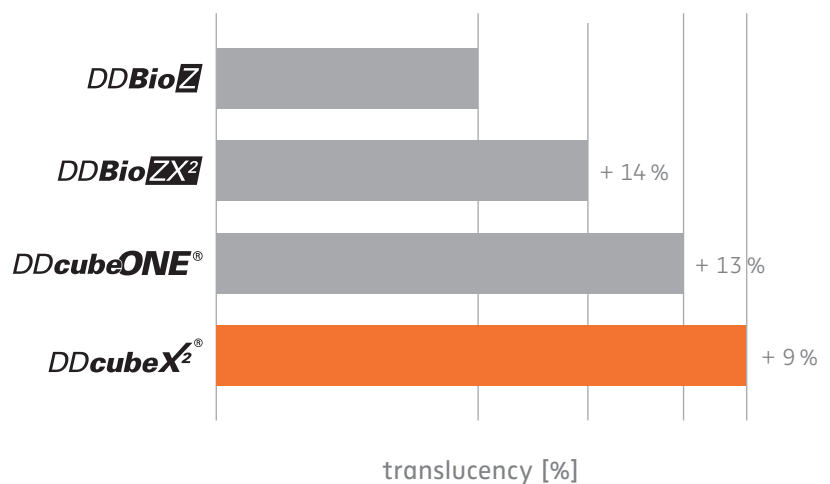
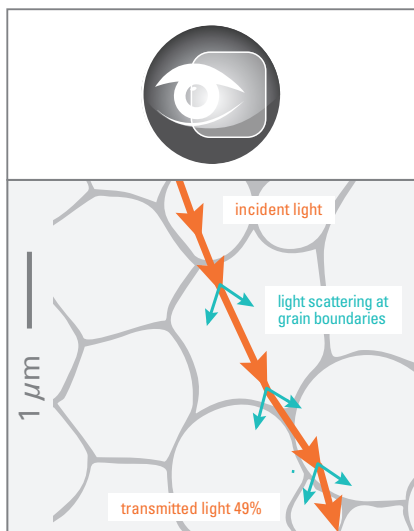
~ 50%

SEM picture of
crystal structure



Fracture toughness

> 4 MPa√m



Translucency

DD cubeX²[®] shows highest possible translucency, due to its significantly reduced light refraction index.

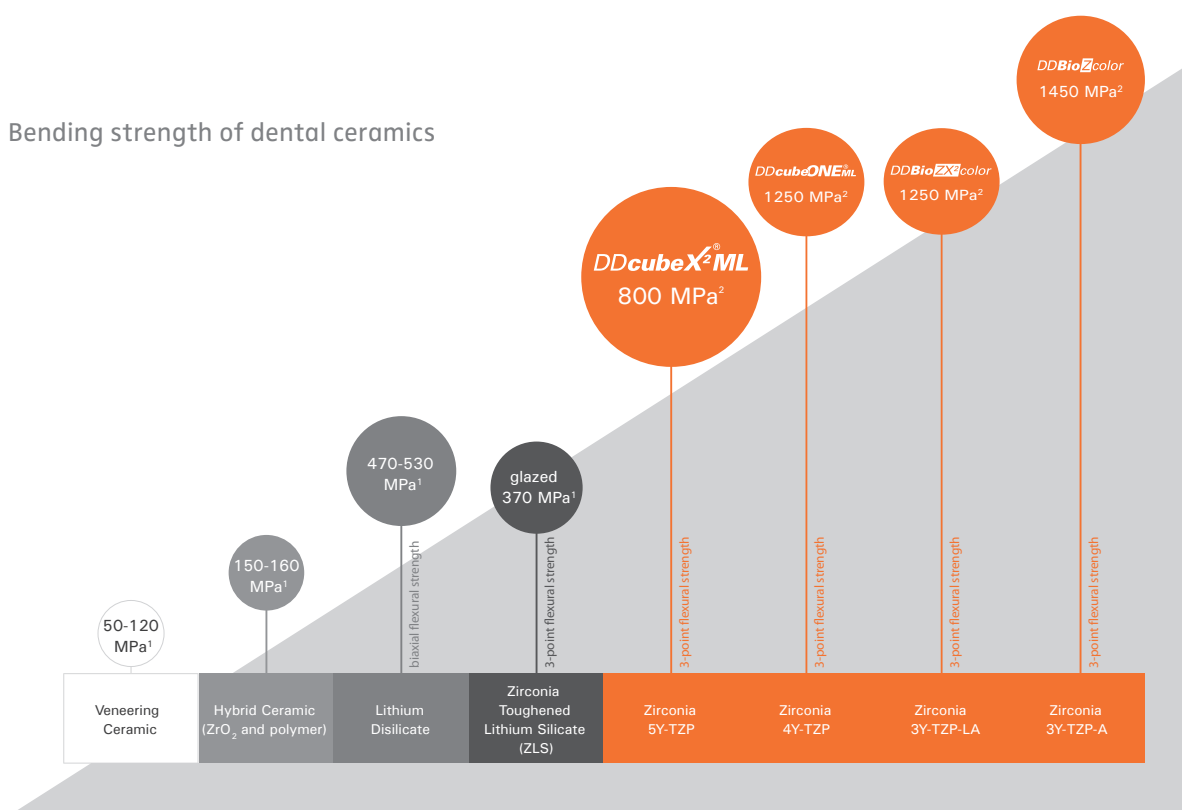
Because of the high amount of integrated large cubic grains, the incident light is scattered less at the grain boundaries while passing through the material. This finally leads to the characteristic, exceptional high light transmittance of DD cubeX²[®].

Sources: Accredited test laboratory. Mechanical properties measured in accordance with DIN EN ISO 6872.
R&D Dental Direkt. Translucency measured by means of a spectrophotometer on 1 mm thick, polished samples.

As strong as zirconium dioxide – As beautiful as lithium disilicate

DD cubeX²® is not to be understood as a replacement for the high-strength 3Y- and 4Y-TZP ceramics.

In fact it offers aesthetics, only known from glass ceramics, for up to three-unit bridges including molars. Increased strength compared to a lithium disilicate with lower minimum wall thickness at the same time offers security and long-term stability.



Sources:

1. Data according to data sheets of relevant branded products, strengths measured in different test- setups.
2. Accredited test laboratory. Flexural strength measured in accordance with DIN EN ISO 6872 in the 3 point approach.
Strengths can vary depending on the test methods and sample preparation. Biaxial strength values are usually higher than 3-point values.

Indications

Though DD cubeX²® is predestined for highly aesthetic anterior restorations, it offers reliable solutions for up to three-unit posterior bridges as well.



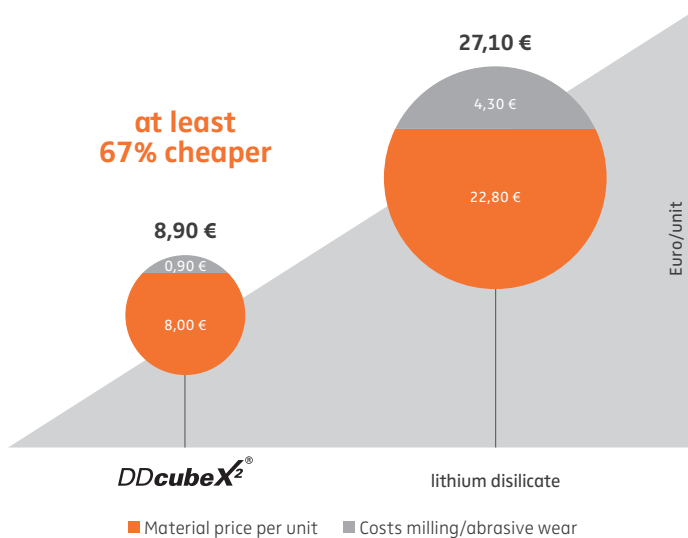
DDcubeX²[®]

cubic zirconia system

What is the cost of a monolithic masterpiece?

In addition to a high probability of success due to the mechanical advantages, DD cubeX²[®] is characterized by an improved, economic efficiency in comparison to other CAD materials. DD cubeX²[®] is optimized for standard, fast zirconia milling strategies and it does not have to be grinded wet like most of the glass or hybrid ceramics. This lowers the risk of faulty work, particular the risk of chipping at the edge is minimised.

Comparison: Unit costs per monolithic molar



DDcubeX²[®]

Calculation: 14 mm disc without discount, benefits: 22 crowns
Tools for Lab Tec (imes-icore), 3 mill strategy, assumption of a uniform wear. Service life approx. 100 crowns

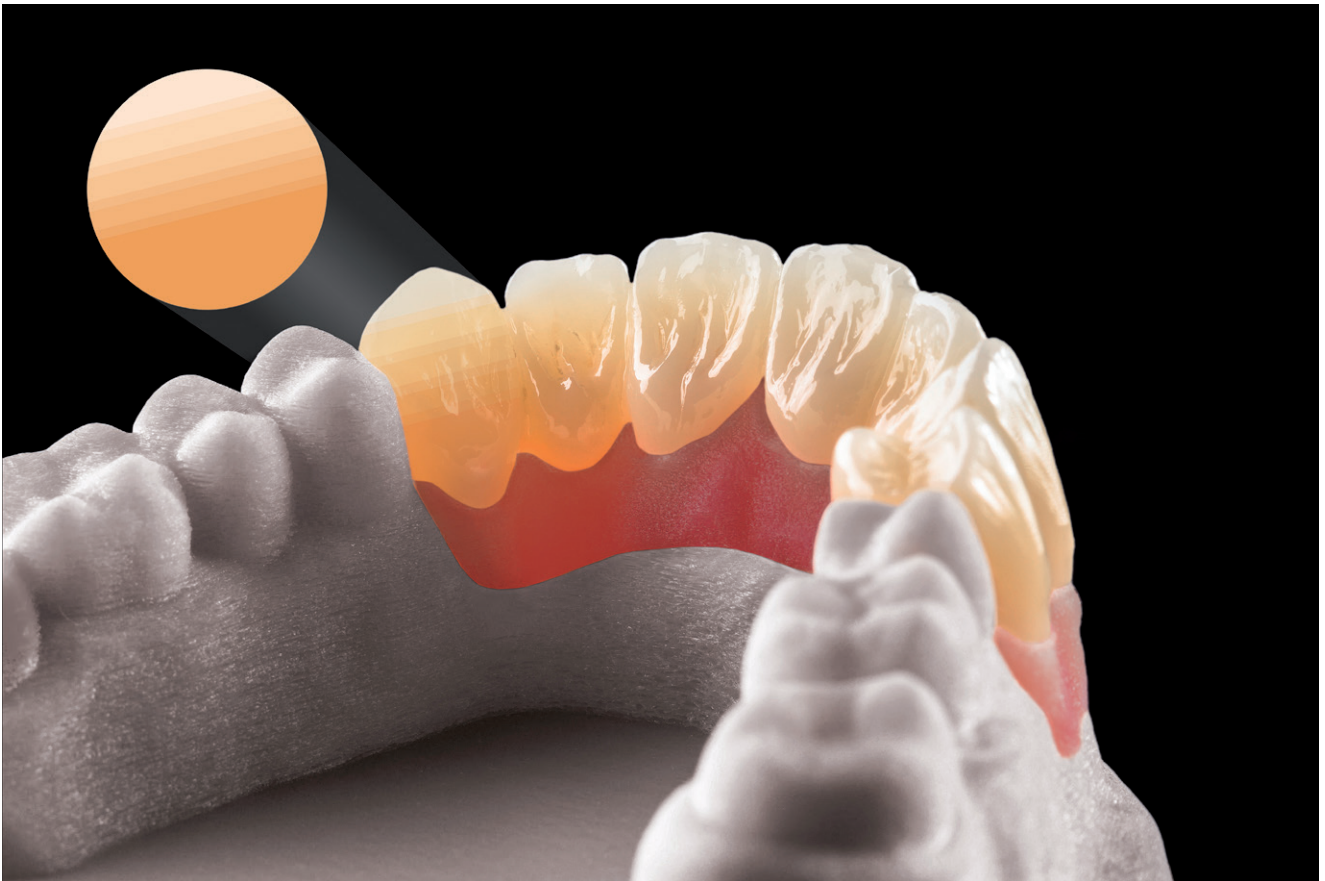
Lithium disilicate:

Calculation: Material price e.g. IPS e.max[®]* CAD HT for CEREC/inLab, C14, average depo price in Germany.

Tools: Service lives are described in different sources from 10 – 25 units, assumption of 20 units, 3 grinder strategy, assumption of a uniform wear.



*e.max[®] is a registered trademark of Ivoclar Vivadent, Liechtenstein



Translucency 44% cervical up to 49% incisal

Source: R&D Dental Direkt. Spectrophotometer on 1mm thick, polished samples from color A3. Values vary and are higher in brighter colours.

DDcubeX²ML[®]

multilayer – cubic zirconia system

Color with concept

The blanks guarantee colors according to VITA[®]* and an overlapping, continuous color gradient. The chroma is reduced and significantly brightened in the incisal.

Our unique production processes ensure a precise reproducibility of the color layers. As a result you can be assured that the desired color gradient as nested in CAD/CAM is achieved after milling and sintering. A clear visual distinction of layers like in DD smart CAM make it easy to define the nesting position in the blank.



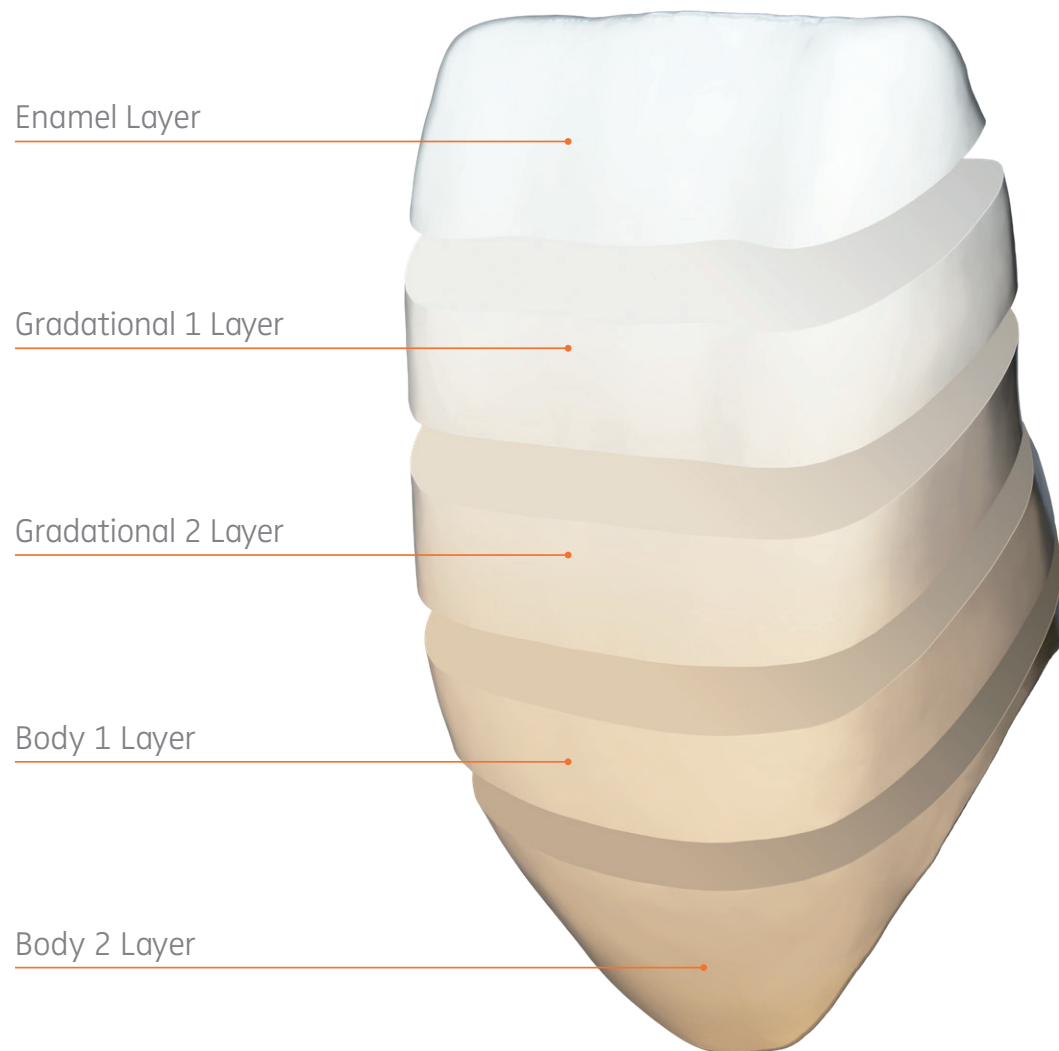
Farben entsprechend VITA[®] Farbschlüssel. Schnittbild von 14 mm Rohlingen

Fix enamel layer



Every blank height has a 3,5 mm enamel layer, so that only the thickness of the body zone increases with higher blank heights. This layer concept is designed for a flexible variation of color intensity.

*VITA[®] is a registered trademark of VITA Zahnfabrik H. Rauter GmbH & Co. KG, Germany



9 Layers

The 5 main layers are optimized in terms of chemistry and grain size to one another. This ensures a homogeneous and continuous diffusing in the 4 transition layers.

DDcubeX²ML[®]

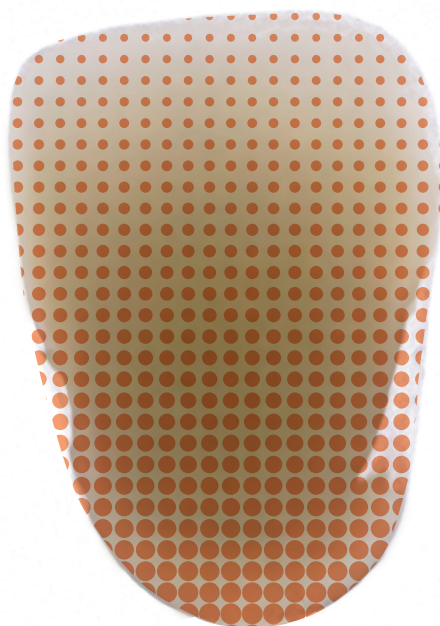
multilayer – cubic zirconia system

Multi Additive Technology[®]

We describe our procedure for the balanced formulation and homogeneous distribution of the chromophoric ions in the structure as Multi Additive Technology[®].

The color and translucency effect is created through the interaction of light with the zirconium oxide structure modified by the color additives.

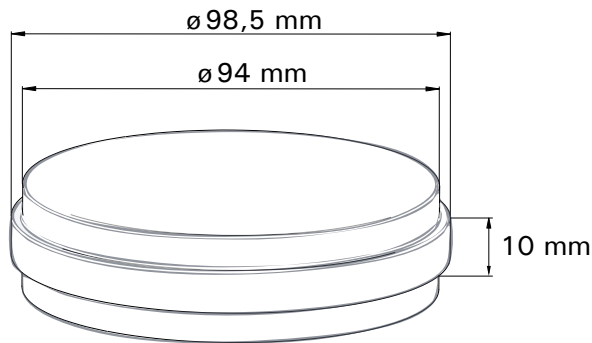
We control the refraction of light through the precise reduction of additives in the layers. This is how you achieve a natural translucency gradient. The cubic zirconium oxide unfurls its complete trans-lucence in the upper incisal third.



Controlled refraction of light through precise reduction of additives in the layers.

DDcubeX²[®]

cubic zirconia system



Measure	Order-no.	DD Coloring liquids
98,5 x 10 mm	G710	<p>DDBasicShade</p> <p>DDProShade^C</p> <p>DDArtElements</p>
98,5 x 12 mm	G711	
98,5 x 14 mm	G712	
98,5 x 16 mm	G713	
98,5 x 18 mm	G714	
98,5 x 20 mm	G715	
98,5 x 25 mm	G716	

DDcubeX²ML[®]

multilayer – cubic zirconia system



Measure	Bleach	A1	A2	A3	A3,5	A4
98,5 x 14 mm	G852017	G852007	G852001	G852002	G852003	G852009
98,5 x 18 mm	G854017	G854007	G854001	G854002	G854003	G854009
98,5 x 22 mm	G856017	G856007	G856001	G856002	G856003	G856009

Measure	B1	B2	B3	B4	C1	C2
98,5 x 14 mm	G852008	G852004	G852010	G852011	G852012	G852005
98,5 x 18 mm	G854008	G854004	G854010	G854011	G854012	G854005
98,5 x 22 mm	G856008	G856004	G856010	G856011	G856012	G856005

Measure	C3	C4	D2	D3	D4
98,5 x 14 mm	G852013	G852014	G852015	G852006	G852016
98,5 x 18 mm	G854013	G854014	G854015	G854006	G854016
98,5 x 22 mm	G856013	G856014	G856015	G856006	G856016

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

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