Bloomden 鹏登生物陶瓷
CAD/CAM ZIRCONIA SOLUTION

Bloomden

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Better Zirconia Better Smile

A LEADING DENTAL ZIRCONIA BLOCK MANUFACTURER

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Company Introduction

Who are we ?

Bloomden Bioceramics has been specializing in manufacturing the highest quality dental zirconia blocks in the market for nearly 10 years. Bloomden has been honored as the member of engineering ceramic association, R&D collaboration firm with college of material sciences, and High-tech enterprise, etc

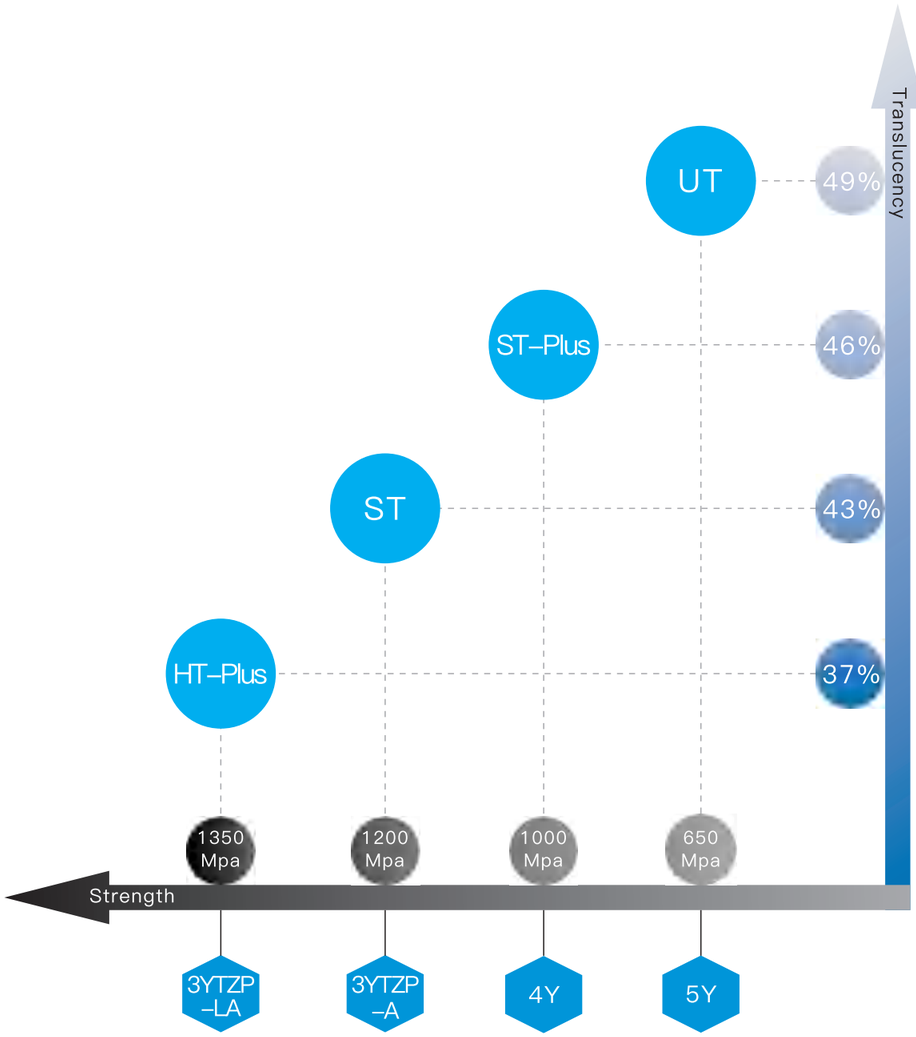
Utilizing the latest technology, the medical level fine zirconium powder and most experienced engineering team, our innovative high strength and high translucent zirconia blocks have quickly grown to be admired and used by lab technicians from all over the world.In recent years, we have been continuously launching production of super translucent zirconia, preshaded zirconia, cubic zirconia with ultra-translucency up to 49%, and Multilayer zirconia based on our strong material science background, unique pressing system and sintering technology. We are able to provide different kinds of dental zirconia blanks for open CAD/CAM milling systems to meet dental Lab’ s requirement.

The higher strength and translucency has proved bloomden's strong R&D and production capacity. Each manufacturing process has been 100% inspected under the ISO quality system. Dimension and shrinkage rate has been controlled under 3 decimal places.Bloomden has been building a team of experienced technician who can provide digital design and surgical guide service to dental labs and dentists. In pursuit of the happiness materially and spiritually on whole employee and contribution to society, as well as return to collaboration partners,

Bloomden will continuously strive to bring more professional materials to deliver healthy restoration and smile.

Better zirconia, better smile.

Bloomden dental zirconia block material comparison



Bloomden dental zirconia block features

Aesthetic
Bloomden dental zirconia blanks/blocks/discs are great translucent in three different levels. It looks more natural–looking than you expect.

Solid
The crowns and bridges made by Bloomden zirconia are better than other metal materials restoration.

Bio–compatibility
Bloomden dental zirconia is the most 100% biocompatibility for dentistry without any radioactivity. Our disc's quality is checked before final packaging to ensure the material is of the highest quality.

Anti–aging
Bloomden dental zirconia is with long–lasting stability and metal free restoration.

Compatibility
Compatible with Amann Girrbach, Zirkonzahn, Roland and most open 98mm CAD/CAM Milling Machines.

All in one
3D PRO zirconia block is suitable for anterior and posterior teeth with best transparency.

System Compatible

Bloomden dental zirconia block applications

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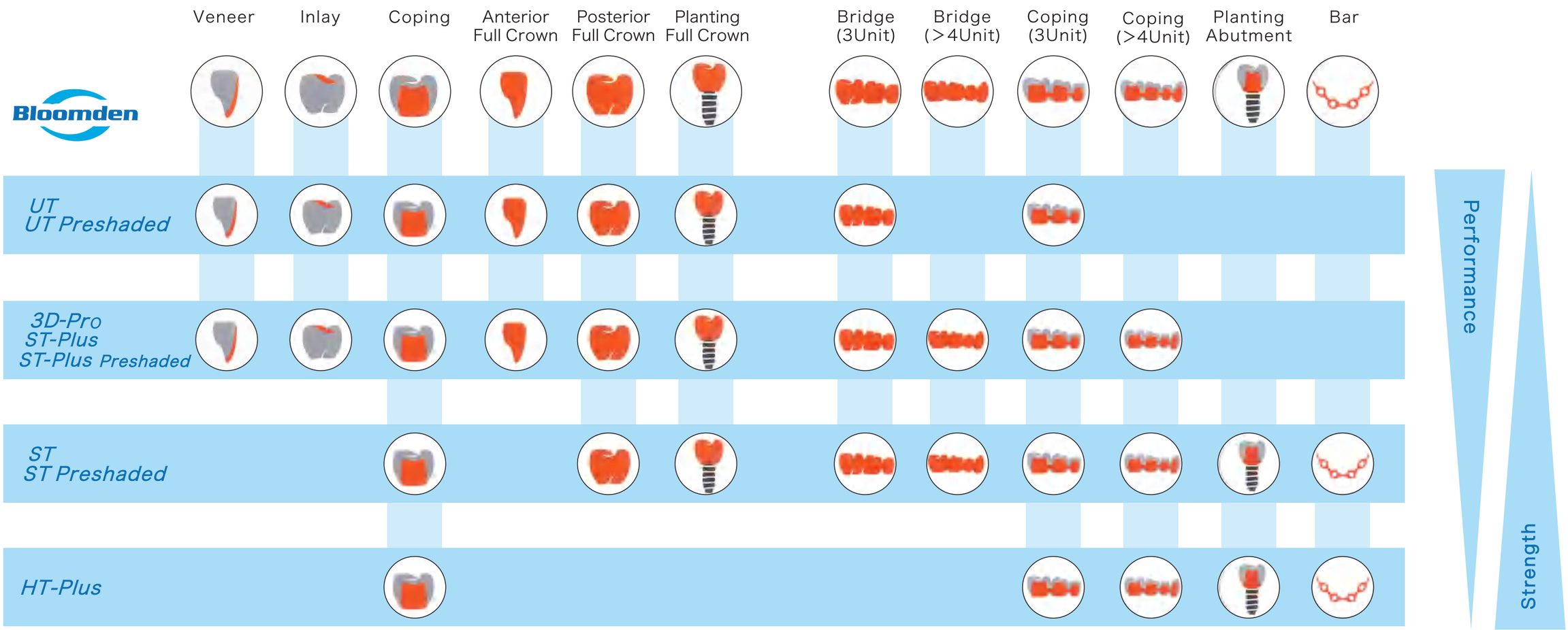
Bloomden dental zirconia block applications



*Ideal results depend on individual circumstances.

HT-Plus Zirconia Block

Features

- High translucency
- For coping and framework
- High aesthetic veneering

Chemical composition

Components	HT-Plus
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	4.5%-6.0%
Al_2O_3	<0.25%
Other Oxides	<0.15%

Physical characteristics

Properties	HT-Plus
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.09±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	1350
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	37%
Chemical solubility after sintering (μg.cm-^{2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g-^{1})	<0.1
Sintering temperature (℃)	1500-1550

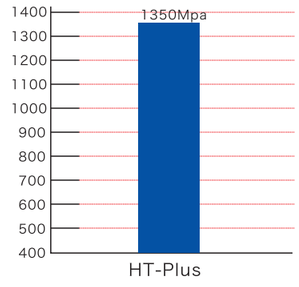
Sintering

- Max Heating rate10℃ per minute
- Final temperature: 1530℃
- Holding time at final temperature: 2 hours
- Cooling should be done without temperature control in closed furnace
- Never open the furnace before it has reached a temperature of less than 80℃ to avoid thermal shocks

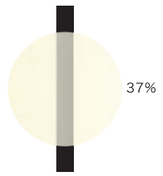
Strength and Translucency

Flexural Strength (Mpa)

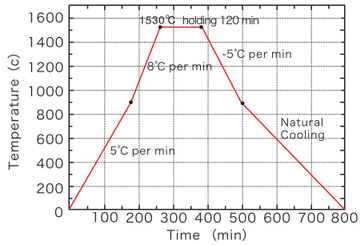
Three point bending strength (Mpa)



Transmittance (1.0mm)



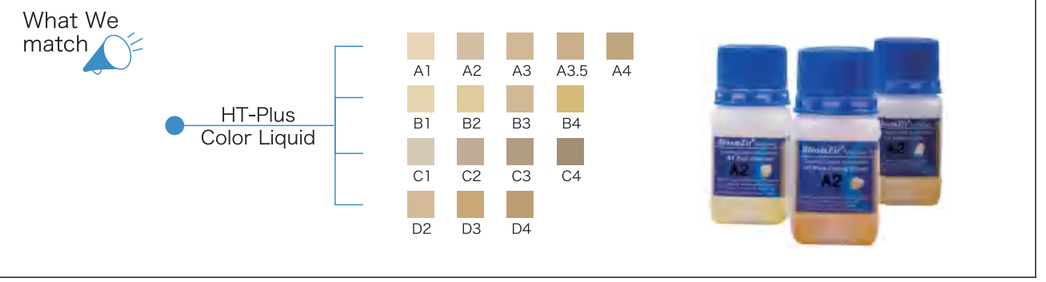
Sintering Chart



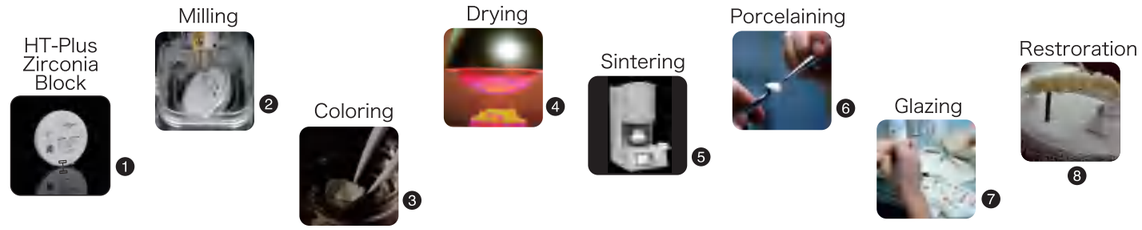
HT-Plus Zirconia Block

Specification

Open system Zirconia	Zirkonzahn system Zirconia	Amann Girrbach System block
OD98*10mm OD98*18mm	OD95*10mm OD95*18mm	
OD98*12mm OD98*20mm	OD95*12mm OD95*20mm	92*75*12mm 92*75*18mm
OD98*14mm OD98*22mm	OD95*14mm OD95*22mm	92*75*14mm 92*75*20mm
OD98*16mm OD98*25mm	OD95*16mm OD95*25mm	92*75*16mm 92*75*25mm



Esthetic process:



ST Zirconia Block

Features

- Super translucency
- For full contour and full contour bridge
- High aesthetic veneering

Chemical composition

Components	ST
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	4.5%-6.0%
Al_2O_3	<0.15%
Other Oxides	<0.15%

Physical characteristics

Properties	ST
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.09±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	1200
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	41%-43%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550

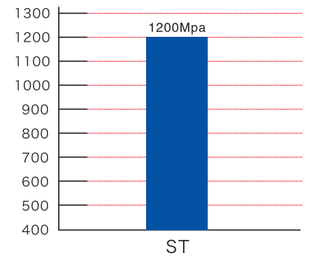
Sintering

- Max Heating rate: 10℃ per minute
- Final temperature: 1530℃
- Holding time at final temperature: 2 hours
- Cooling should be done without temperature control in closed furnace
- Never open the furnace before it has reached a temperature of less than 80℃ to avoid thermal shocks

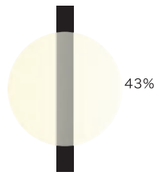
Strength and Translucency

Flexural Strength (Mpa)

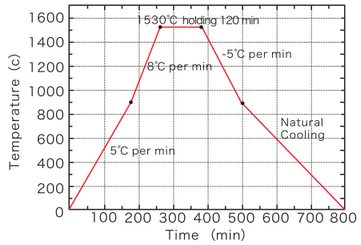
Three point bending strength (Mpa)



Transmittance (1.0mm)



Sintering Chart



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ST Zirconia Block

Specification

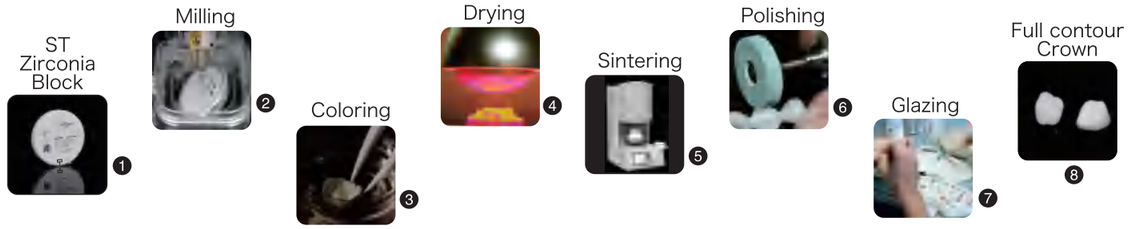
Open system Zirconia	Zirkonzahn system Zirconia	Amann Girrbach System block
OD98*10mm OD98*18mm	OD95X10mm OD95*18mm	
OD98*12mm OD98*20mm	OD95X12mm OD95*20mm	92*75*12mm 92*75*18mm
OD98*14mm OD98*22mm	OD95*14mm OD95*22mm	92*75*14mm 92*75*20mm
OD98*16mm OD98*25mm	OD95*16mm OD95*25mm	92*75*16mm 92*75*25mm

What We match

ST Color Liquid

A1 A2 A3 A3.5 A4
B1 B2 B3 B4
C1 C2 C3 C4
D2 D3 D4

Esthetic process:



ST Preshaded Block

Features

- Monolithic crowns and bridges
- High aesthetic veneering
- No need coloring, VITA 16 shades

Chemical composition

Components	ST Shaded
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	4.5%-6.0%
Al_2O_3	<0.5%
Other Oxides	<0.5%

Physical characteristics

Properties	ST Shaded
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.09±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	1100
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<43%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550

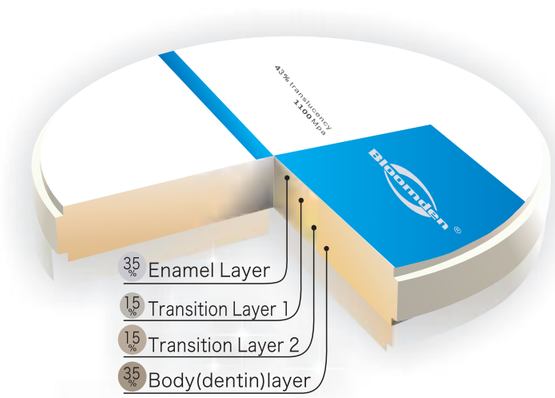
Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

ST Multilayer Block

Features

- Monolithic crowns and bridges
- High aesthetic veneering
- 4 layers gradient



Chemical composition

Components	ST Multilayer
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	4.5%-6.0%
Al_2O_3	<0.5%
Other Oxides	<0.5%

Physical characteristics

Properties	ST Multilayer
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.09±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	1100
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<43%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550

Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

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ST-Plus Block

SPECIAL Offer

Features

- Super translucency
- For anterior&interior
- High aesthetic veneering

Chemical composition

Components	ST Plus
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	7.0%-7.8%
Al_2O_3	<0.15%
Other Oxides	<0.15%

Physical characteristics

Properties	ST Plus
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.08±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	1000
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	46%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550

Physical characteristics

Product Size	Specification (mm)	COLOR LIQUID
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4 Compatible with ST Color Liquid
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

SPECIAL Offer

Bloomden 鹏登生物陶瓷 CAD/CAM Zirconia solution

ST-Plus Preshaded Block

Features

- Super translucency
- For anterior&interior
- High aesthetic veneering

Chemical composition

Components	ST Plus Preshaded
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	7.0%-7.8%
Al_2O_3	<0.15%
Other Oxides	<0.15%

Physical characteristics

Properties	ST-Plus Preshaded
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.08±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	900
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<46%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550

Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 B1 B2
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

Bloomden 鹏登生物陶瓷 CAD/CAM Zirconia solution

ST-Plus Multilayer Block

SPECIAL Offer

Features

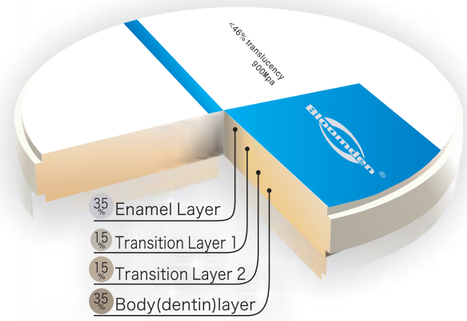
- Super translucency
- For anterior&interior
- High aesthetic veneering

Chemical composition

Components	ST Plus
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	7.0%-7.8%
Al_2O_3	<0.15%
Other Oxides	<0.15%

Physical characteristics

Properties	ST-Plus Multilayer
Density before sintering (g.cm^{-3})	3.15±0.05
Density after sintering (g.cm^{-3})	6.08±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	900
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<46%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1500-1550



Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 B1 B2 BL1 BL2 BL3 BL4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

Bloomden 鹏登生物陶瓷 CAD/CAM Zirconia solution

UT zirconia Block

Features

- Ultra translucency
- For anterior
- High aesthetic veneering

Chemical composition

Components	UT
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	9%-10%
Al_2O_3	<0.05%
Other Oxides	<0.05%

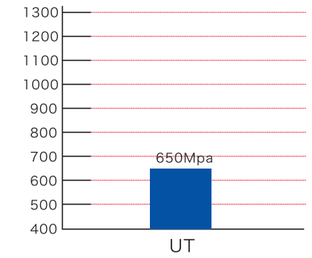
Physical characteristics

Properties	UT
Density before sintering (g.cm^{-3})	3.20±0.05
Density after sintering (g.cm^{-3})	6.06±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	650
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	49%
Chemical solubility after sintering (μg.cm^{-2})	<100
Cytotoxicity	0 Level
Radioactivity (Bq.g^{-1})	<0.1
Sintering temperature (℃)	1435-1470

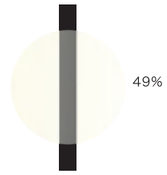
Strength and Translucency

Flexural Strength (Mpa)

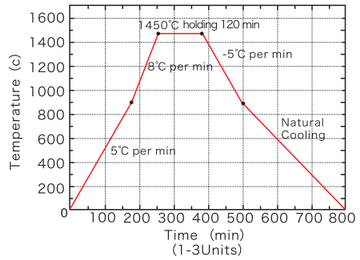
Three point bending strength (Mpa)



Transmittance (1.0mm)



Sintering Chart



Sintering

- Max Heating rate: 10℃ per minute
- Final temperature: 1450℃
- Holding time at final temperature: 2 hours
- Cooling should be done without temperature control in closed furnace
- Never open the furnace before it has reached a temperature of less than 80℃ to avoid thermal shocks

UT Zirconia Block

Specification

Open system Zirconia	Zirkonzahn system Zirconia	Amann Girrbach System block
OD98*10mm OD98*18mm	OD95*10mm OD95*18mm	
OD98*12mm OD98*20mm	OD95*12mm OD95*20mm	92*75*12mm 92*75*18mm
OD98*14mm OD98*22mm	OD95*14mm OD95*22mm	92*75*14mm 92*75*20mm
OD98*16mm OD98*25mm	OD95*16mm OD95*25mm	92*75*16mm 92*75*25mm

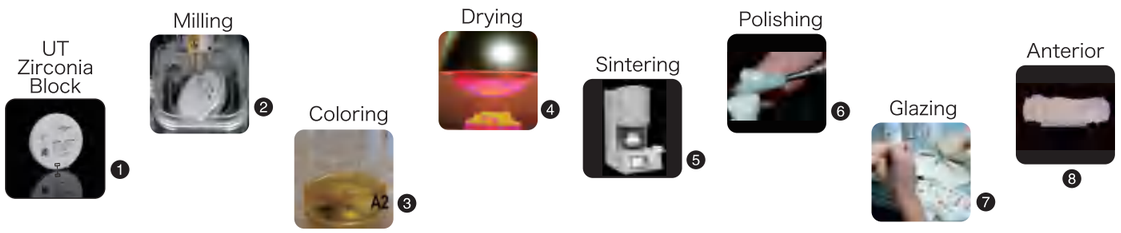
What We match

UT Color Liquid

A1 A2 A3 A3.5

B1 B2 B3 B4

Esthetic process:



UT Preshaded Block

Features

- Monolithic crowns and bridges (up to 3 units)
- High aesthetic veneering
- Especially for monolithic anterior restorations (bridges up to 3 units)
- 16 popular VITA shades

Chemical composition

Components	UT Shaded
$ZrO_2+HfO_2+Y_2O_3$	⩾99%
Y_2O_3	9%-10%
Al_2O_3	<0.5%
Other Oxides	<0.5%

Physical characteristics

Properties	UT Shaded
Density before sintering ($g.cm^{-3}$)	3.20±0.05
Density after sintering ($g.cm^{-3}$)	6.06±0.01
CTE (25-500℃) (K^{-1})	10.5±0.5
Flexural strength after sintering (Mpa)	600
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<49%
Chemical solubility after sintering ($\mu g.cm^{-2}$)	<100
Cytotoxicity	0 Level
Radioactivity ($Bq.g^{-1}$)	<0.1
Sintering temperature (℃)	1435-1470

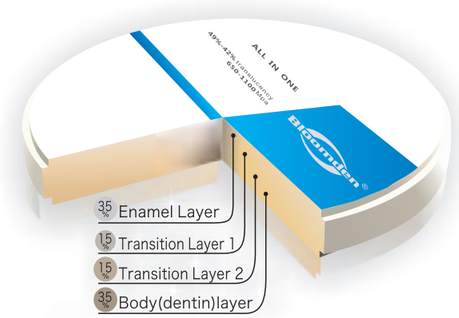
Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

UT Multilayer Block

Features

- Monolithic crowns and bridges（up to 3 units）
- High aesthetic veneering
- Especially for monolithic anterior restorations（bridges up to 3 units）
- No need coloring 16 popular VITA shades
- Natural tooth looking



Chemical composition

Components	UT Multilayer
ZrO_2+HfO_2+Y_2O_3	⩾99%
Y_2O_3	9%-10%
Al_2O_3	<0.5%
Other Oxides	<0.5%

Physical characteristics

Properties	UT Multilayer
Density before sintering（g.cm^{-3}）	3.20±0.05
Density after sintering （g.cm^{-3}）	6.06±0.01
CTE（25-500℃） (K^{-1})	10.5±0.5
Flexural strength after sintering（Mpa）	600
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<49%
Chemical solubility after sintering（μg.cm-^{2}）	<100
Cytotoxicity	0 Level
Radioactivity（Bq.g-^{1}）	<0.1
Sintering temperature（℃）	1435-1470

Physical characteristics

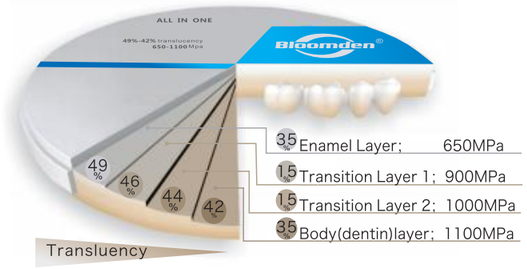
Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

SPECIAL Offer

3D-Pro Block

Features

- Monolithic crowns and bridges
- High aesthetic veneering
- Especially for monolithic anterior restorations
- No need coloring 16 popular VITA shades
- Natural tooth looking



Chemical composition

Components	3D-Pro
ZrO_2+HfO_2+Y_2O_3	⩾99%
Y_2O_3	4.5%-10%
Al_2O_3	<0.15%
Other Oxides	<0.5%

Physical characteristics

Properties	3D-Pro
Density before sintering（g.cm^{-3}）	3.15±0.05
Density after sintering （g.cm^{-3}）	6.07±0.02
CTE（25-500℃） (K^{-1})	10.5±0.5
Flexural strength after sintering（Mpa）	>650
Accelerated aging surface monoclinic phase content	<15%
Light transmittance	<49%
Chemical solubility after sintering（μg.cm-^{2}）	<100
Cytotoxicity	0 Level
Radioactivity（Bq.g-^{1}）	<0.1
Sintering temperature（℃）	1450-1510

Physical characteristics

Product Size	Specification (mm)	COLOR
OD98	10/12/14/16	A1 A2 A3 A3.5 A4 B1 B2 B3 B4 C1 C2 C3 C4 D2 D3 D4 BL1 BL2 BL3 BL4
	18/20/22/25	
OD95	10/12/14/16	
	18/20/22/25	
92*75	12/14/16	
	18/20/25	

Bloomden Cases

Clinic Cases

Before

After

Before

After

Before

After

WORTH IT

"Bloomden stands for high-strength restorations with outstanding marginal fit and excellent aesthetics. Due to its proven reliability, our lab has been using its zirconia block for 10 years that copings or substructures made out of Bloomden Zirconia will not break.....Said by Mr. Alexandr"

Bloomden Cases

No ceramics, only glaze

3D Pro

UT ML

ST

HT Plus

UT Preshaded

UT

PMMA

Bloomden provides a variety of compatible PMMA blank with Amann Girrbach, Zirkonzahn, and open CAD/CAM milling systems of 98mm.

Our PMMA milling blanks are 100% high quality resin material for making crowns and bridges that serve as temporary restorations.

We can offer different types of PMMA:

- Monolayer (16 VITA colors)
- Multilayer (16 VITA colors)
- Pink
- Flexible

WAX

Bloomden offers various wax blank compatible wiht Amann Girrbach, Zirkonzahn, and open CAD/CAM milling systems.

Our wax milling blank are resin reinforced was blank which is characterized by 100% burn out without leaving a residue and suitable for CNC milling and casting technique.

Available colors: white,blue,green.

PEEK

PEEK blank is a ceramic milled high performance polymer PEEK, it is metal free alternative for permanent restorations. This material is approved for implant-supported bridges, secondary structures or denture bases.

There are 4 clors: natural, white, light pink, light yellow.

Diamond Turbo Grinder

The diamond grinder system with extraordinary grinding properties,extremely long service life and maximum efficiency due to high grade diamond and binding material.

They can cut through Zirconia with a minimal amount of pressure, this alleviates the chancesof micro fractures within the Zirconia substructure.Gentle and pressure-free grinding allows perfect finishing and efficient revoval of material.

Milling Burs

Bloomden milling burs have long time service and can be presented by two types:DLC withresource 120-150 units and DC with resource 400-500 units.

Color Liquid

Bloomden color liquid can help you to achieve excellent results in coloring.

Our Market

Bloomden’s customers have spread all over the world . And BloomZir has earned greatreputation especially in North America and Europe . The market is still expanding in recent years.

Bloomden 鹏登生物陶瓷 CAD/CAM Zirconia solution

Enterprise Honor

CE Certificate

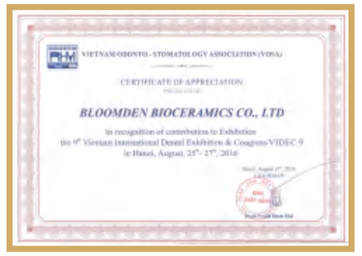
ISO13485

Patent

Advanced Technology Enterprise

ALIBABA Gold Supplier & Trademark Patent

AEEDC Dubai 2016



VIDEC VETNAM

Base of Industry, College and Institute

Hunan New Material Enterprise