



Creative Management



Ethical Management



Communication Management

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**ZIRCO S-E<sup>®</sup>**  
Innovation Ceramic Chemical

BIDEN Co., Ltd.



We are always striving  
to help you achieve the highest  
standard of clinical excellence.

## Outstanding R&D Capabilities

World-class  
surface  
treatment  
technology

Overcoming the  
limitations of  
procedures

Enhancing  
aesthetic  
quality

Increasing the  
convenience  
and accuracy of  
procedures



Zircos-E HYCERA  
Zircos-E FORZA 300



Zircos-E Etching Liquid  
Aqua Coloring liquid



Zirconia special  
Shading solution



JIG-GEL



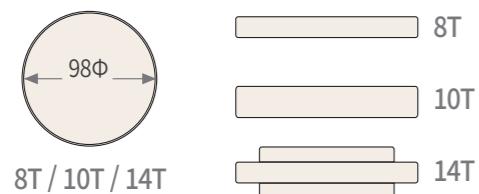
Zircos-Com Hard  
Zircos-Com Flow

# Zircos-E HYCERA

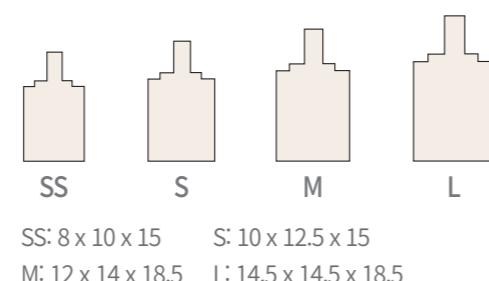


**Shade** A1, A2, A3, A4, Bleach

## Disc Type



## Pin Type



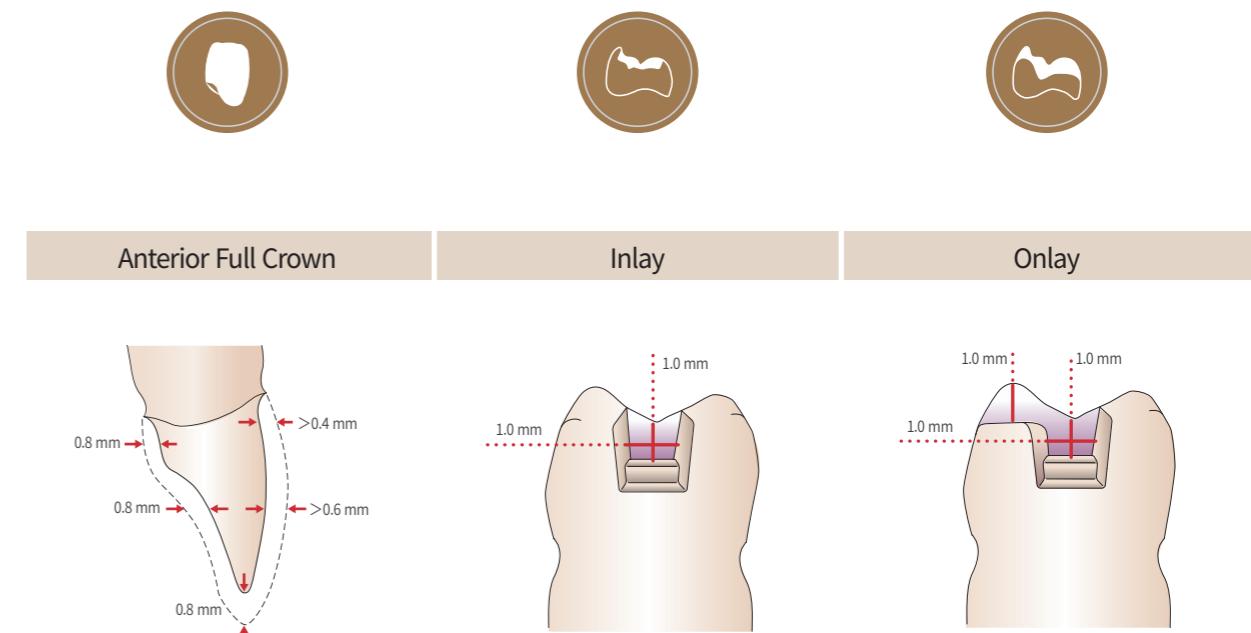
## Unique Selling Points

Feature	Description
Next-Gen Nano Hybrid	Combines zirconia strength with ceramic beauty
Precision & Durability	Ultra-fine particles ensure long-lasting results
Natural Light Reflection	Mimics real teeth for superior translucency
Simplified Workflow	Easy shaping, reduced processing time

Zircos E Hycera is a new material nano hybrid ceramic product with excellent aesthetics, strength, abrasion resistance and discoloration resistance, made of high density curing matrix and nanometer particle zirconia and silicate.

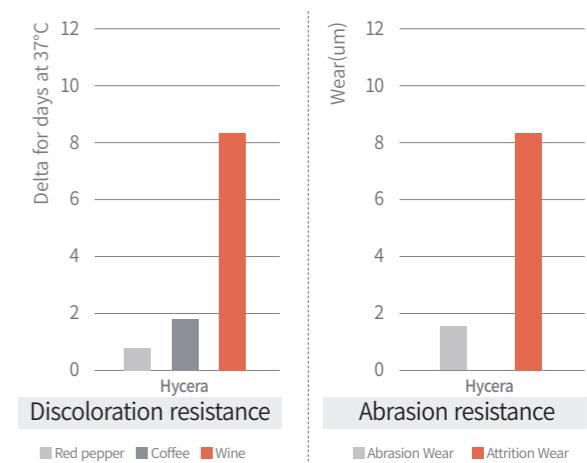
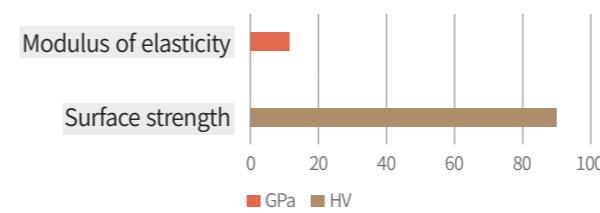
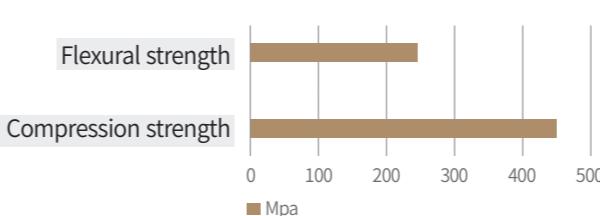


## Indication



※ These are products suitable for use on molars as well. (Teeth 4 to 5)

## Physical Properties



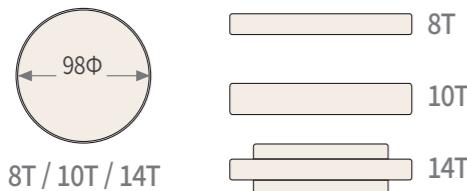
New material nano hybrid ceramic product

# Zircos-E FORZA 300

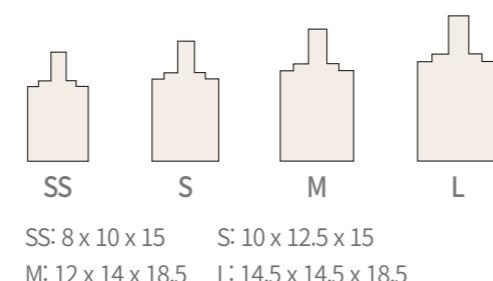


**Shade** A1, A2, A3, A4, Bleach

## Disc Type



## Pin Type



## Advantages

### High Flexural Strength

Designed with a flexural strength exceeding 300 Mpa, minimizing the risk of cracking or breaking during dental procedures.

### High Biocompatibility and Safety

Complies with ISO and various biocompatibility standards, making it a product that can be used with confidence.



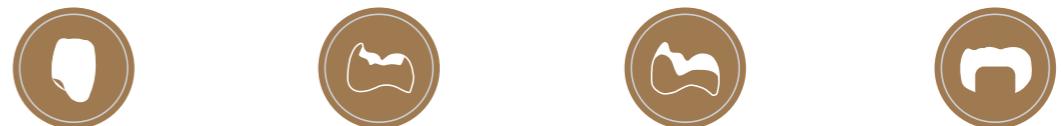
**Excellent Radiopacity**  
Exceeds 1.0mm aluminum in radiopacity, providing high visibility in dental X rays.

**Low Water Absorption Degree**  
Low water absorption ensures minimal shape change and stability over long term use.

FORZA 300 is a cutting edge resin block for dental restorations, stands out in both performance and safety. Crafted with high quality raw materials, including inorganic glass and biocompatible polymers, it's ideal for creating crowns, inlays, and veneers through CAD/CAM technology.



## Indication

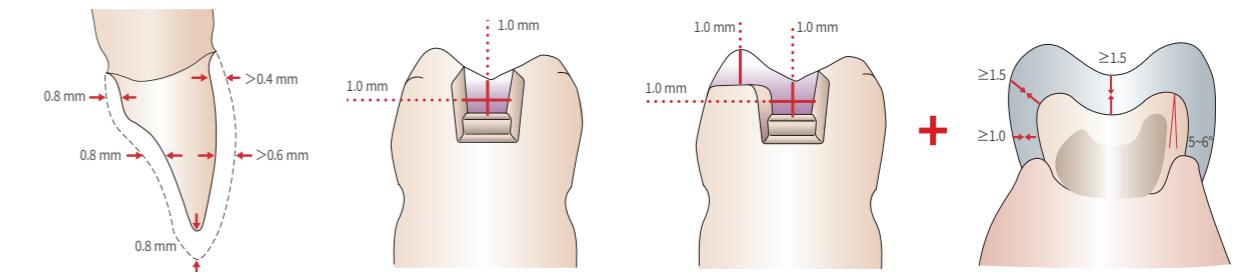


Anterior Full Crown

Inlay

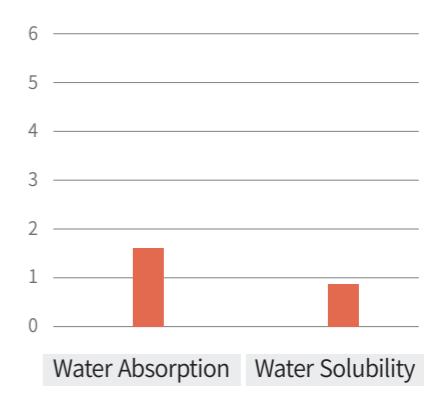
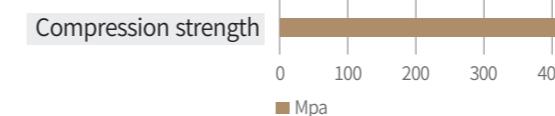
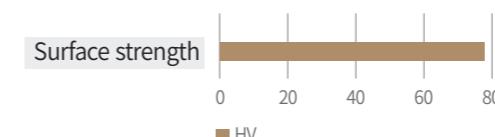
Onlay

Crown



※ These are products suitable for use on molars as well. (Teeth 6 and 7)

## Physical Properties



## zirconia crown etching system

# Zircos-E Etching Liquid

Zircos-E is a complete zirconia crown etching system developed with the collaboration between KICET (Korea Institute of Ceramic Engineering and Technology) and Bio Den Co., Ltd. by combining zirconia etching technologies.



## Purpose of use



Venner Crowns



Inlay/Onlay



Maryland Bridge

## How to use Zircos-E



1. Please wear safety goggles, gloves, and clothing before using the Working Box.

3. Remove the container from the working box and place it in the Ultrasonic Cleaner. Run the cleaner for 30mins.

4. After the 30 minutes, remove the container from the ultrasonic cleaner and place the crown in a container. Rinse the crown in cold running water for 2 minutes then steam clean the crown.

5. Anneal after removing the water from the crown. (Increase temperature to 1150C/2102F and hold for 30mins. Slowly cool then remove the crown when below 200C/392F)

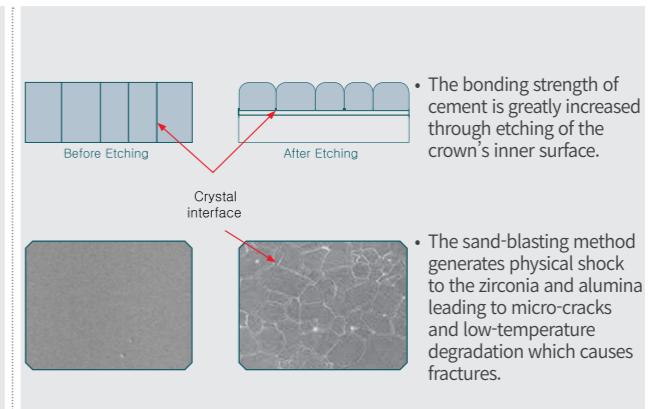
6. Complete by layering porcelain in the usual way or glazing if restoration is full zirconia crown.

## Zircos-E Theoretical Background

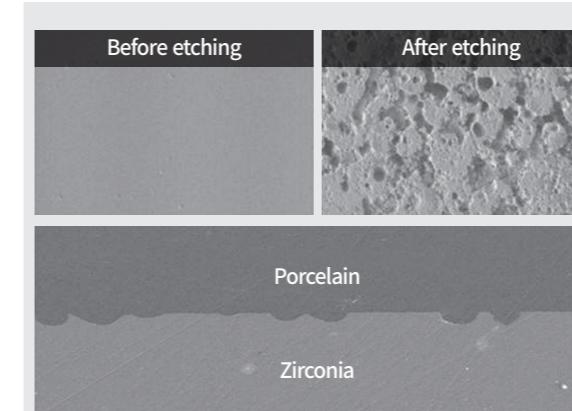
Zircos-E is a liquid surface treatment solution that strengthens the bond to porcelain by activating the ions on the zirconia surface.



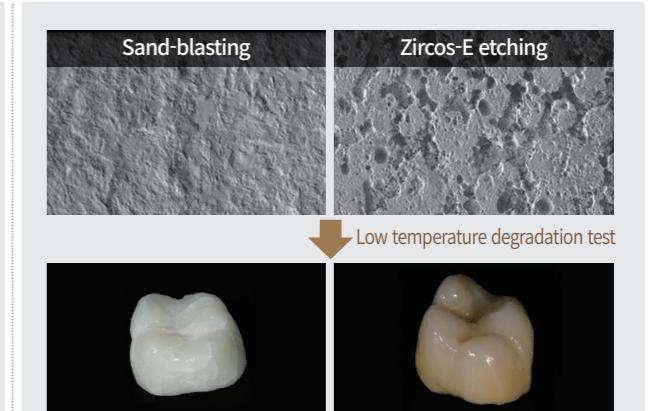
Using this technique, the zirconia-specific color is removed from the surface and through glazing, excellent shades are produced.



## Zircos-E Surface Treatment

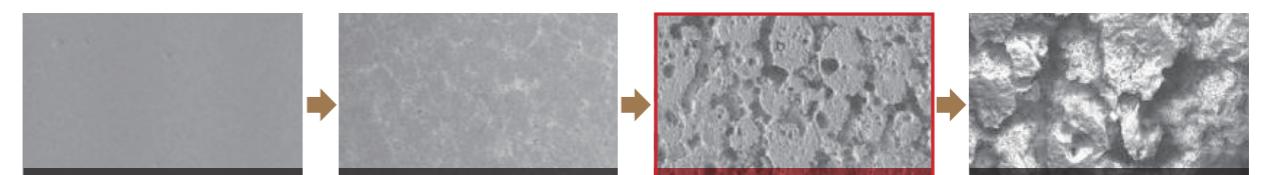


Using this technique, the zirconia-specific color is removed from the Zircos-E Etching Solution activates the zirconia surface ions to greatly strengthen the adhesion to porcelain by increasing the use of the porous zirconia surface.



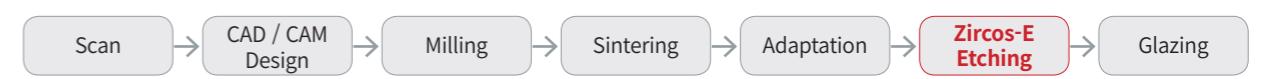
- It is challenging to get an uniform roughness on the surface of crown due to zirconia being harder and not smaller than the alumina powder used in sand-blasting.
- Depending on the experience and ability of the dental technician, it is difficult to treat the surface uniformly by sand-blasting.

## Time-lapsed process of etching treatment



Regardless of skill level and experience, the process can be complete in 30mins.

## Etching treatment schedule



Zircos-E® Coloring Liquid System

# Aqua Coloring liquid

The shade liquid's tone and hue express beautifully on the surface of the zirconia and all brands of zirconia blocks are compatible.

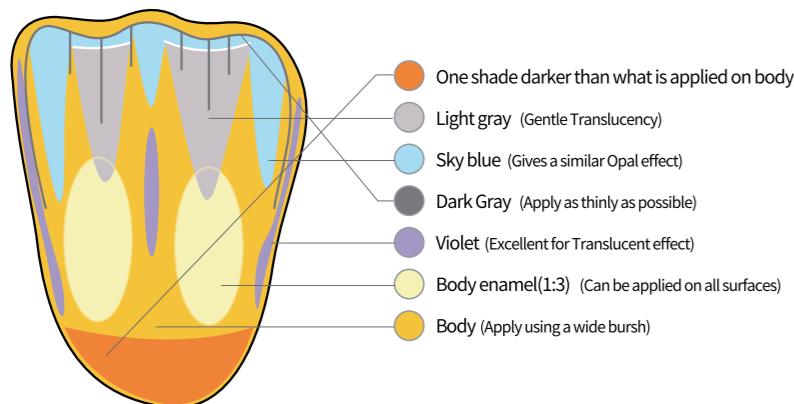
## Aqua Coloring Liquid component

Dentine	A1, A2, A3, A3.5, A4 B1, B2, B3, B4 C1, C2, C3, C4 D2, D3, D4
Color	Gray, Pink, Violet, Brown, White, Orange, Blue, Dark gray



## Index

All colors schemes are displayed above the diagram.  
Use the color to distinguish which shade liquid for use.



## Area of application for Special Liquids

Category	Color	Area of Application
BROWN	●	Deep area of occlusal fossa, Cusp, Abrasion effect of incisors, Cervical root.
BLUE	●	Opal effect, clear emerald layer and translucency effect.
L-GRAY	●	Delicate translucency, Lowering brightness, Effect of typical enamel wear. of typical enamel wear.
D-GRAY	●	Deep translucency, Translucence for deep marginal ridges, Deep translucency effect for cusp, Translucent effect for adjacent occlusal sides.
ORANGE	●	Used with Shade B series as cool yellow, Used be-tween occlusal cusps, Natural wear effect of cusp.
PINK	●	Gingival effect, Warm tooth effect, Gingival reflex effect.
VIOLET	●	Bright translucent effect, Ridge expression, Cusp expression, Pale white band expression (Shade A3 or above).

Acid free!  
Contamination free!

## DETAIL COLORING (anterior teeth) - Sample Photo



## DETAIL COLORING (posterior teeth) - Sample Photo



## Advantages of ZIRCOS-E Coloring Liquid



Acid Free characteristic makes the shade liquid harmless to the crown and reduces contamination to the sintering machine	Coloring liquid does not need to be dry before the sintering process.	The shade liquid's tone and hue express beautifully on the surface of the zirconia	All brands of zirconia blocks are compatible.	Two colors can be mixed and the color intensity can be manipulated by adding water.
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## Consideration

- Use moderately when dipping and seal closed to prevent evaporation.
- Crown must be dry before applying another shade and special effects. Dryness is essential to express each color sharply.
- After coloring, dry for at least 3 minutes using hot air from hairdryer. If using a conventional oven/dryer, set temperature between 248~302°F (120~150°C) for at least 30 minutes.
- Do not mix brushes with different colors.
- Keep refrigerated for longer shelf life.
- Keep away from clothing.

# Zirconia special Shading solution

Snow Light is an ultra thin, highly permeable solution for zirconia crown.

With just a single brush application, it effectively conceals the underlying color of abutment teeth, delivering superior aesthetic results.



It is ideal for implant upper restorations, tetracycline-stained teeth, necrotic teeth, whitened teeth, and abutments with poor or discolored backgrounds.

This solution ensures both high translucency and seamless integration for natural-looking prosthetics.



## Key Features

- Single application for effective shading
- High permeability and translucency
- Consistent and natural aesthetic results



# JIG-GEL

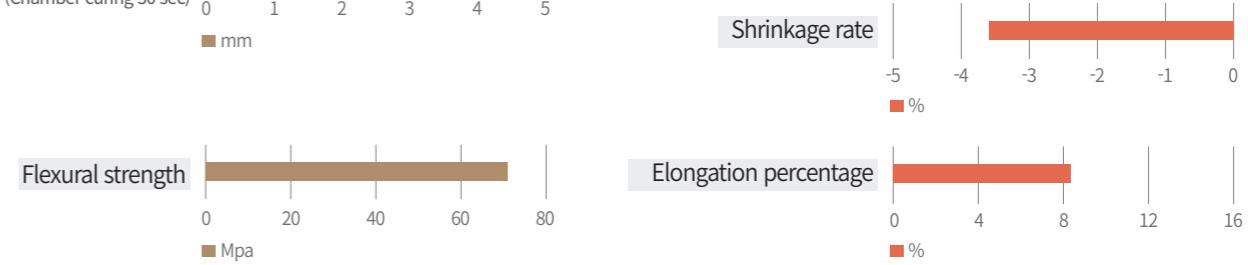
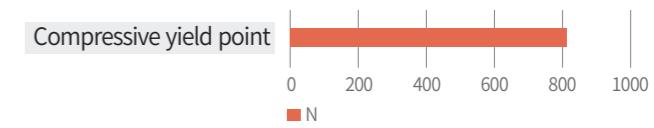
JIG-GEL is a gel type substance containing resin material to make implant jig and implant verification bar. JIG GEL is a injection method, instead of mixing resin powder and liquid.



## Advantages JIG-GEL

- Easy to build up & Simple to use
- Reduce working time
- It does not need separation and polishing
- It does not have resin odor
- Affordable price
- Guaranteed quality  
(Optimum Flow and Little shrinkage)

## Optimum Flow



# Zircos-Com Hard

Light cured, radiopaque nano-hybrid zirconia composite for the restorative treatment of anterior and posterior teeth.



## Application Ranges

- Class I ~ V fillings
- Reconstruction of traumatically affected anterior
- Correction of shape and shade for better aesthetic appearance
- Locking, splinting of loose anterior
- Repairing veneer
- Filling deciduous teeth
- Core build-up under crowns
- Composite Inlays
- Depth of cure : 2.5mm (10 seconds)



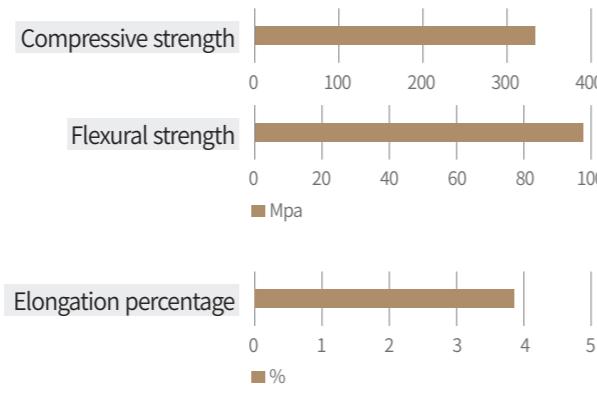
## Contents

- Kit : ZIRCOS-Com 4g Syr.\*5ea  
[A1, A2, A3, A3.5, B2 : Shade selectable]  
ZIRCOS-Etch 3ml Syr.\*1ea  
ZIRCOS-Bond 5ml\*1ea
- Refill : ZIRCOS-Com 4g Syr.\*1ea

## Shade

A1, A2, A3, A3.5, A4, A2E, A3E  
B1, B2, B3, C2, C3  
D2, D3, OA2, OA3, TL, WT, OP

## Physical properties



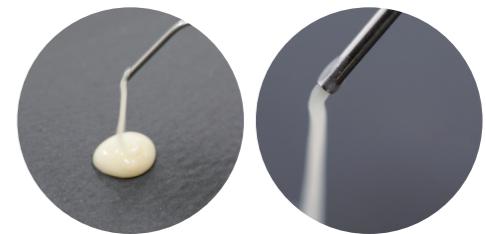
# Zircos-Com Flow

Light cured, radiopaque nano-hybrid flowable zirconia composite for the restorative treatment



## Application Ranges

- Restoration for III ~ V case
- Reconstruction of traumatically affected anterior
- Base/liner in the Class I, Class II restorations
- Repair of resin, porcelain and acrylic temporary materials
- Pit and fissure sealant



## Contents

- Kit : ZIRCOS-Com Flow 2g Syr. \*4ea  
[A1, A2, A3, A3.5 : Shade selectable]  
ZIRCOS-Etch 1.2ml Syr.\*1ea
- Refill : ZIRCOS-Com Flow 2g Syr.\*2ea

## Shade

A1, A2, A3, A3.5, A4, A2E, A3E  
B1, B2, B3, C2, C3  
D2, D3, OA2, OA3, TL, WT, OP

## Physical properties

