

Please read through this manual before using the product.



TWiNY

TWiNY & TWiNY Flow MANUAL

Controlled Medical Devices
Light and Heat Cured Indirect Composite Resin

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Controlled Medical Devices Light and Heat Cured Indirect Composite Resin

TWiNY

TWiNY is a hybrid composite resin made of ceramic cluster filler. It offers not only easy handling and excellent aesthetics, but also high product density and outstanding toughness. Thanks to its "anchor effect" (holding the product in place as if by anchor), decreases in product density and fractures are prevented, even if the product is used in the mouth over a long period. Biological safety tests based on global standard ISO 10993 "Biological evaluation of medical devices" have been conducted on TWiNY. Also, our company's original biogenetic evaluation tests on cell, tissue have also revealed further details of the effect TWiNY in the mouth.

⚠ Contraindications and Prohibitions

Do not use this product on patients who have a history of allergy (such as skin irritation) to this product or methacryl monomer.

Shapes, Composition and Principles

This product consists of the following items and contains ingredients below:

Item	state	ingredients
Opaque Resin	Paste	metacrylate monomer, inorganic fillers, pigments, etc.
Body Resin, Body Resin Flow	Paste	metacrylate monomer, inorganic fillers, pigments, etc.
Stain	Paste	metacrylate monomer, inorganic fillers, pigments, etc.
Repair Primer	Liquid	Ethanol, etc.
Repair Liquid	Liquid	metacrylate monomer, etc.
Luna-Wing Primer Paste	Paste	Silane Coupling Agent, etc.

Principles: This material is a light-cure type, cured by visible light and heat. Items marked "Flow" have low viscosity, and are referred to as Body Resin Flow or TWiNY Flow. On the other hand, normal types are referred to as "Body Resin" or "Paste Type".

⚠ N.B. : Technical Directions and Points for Attention

1. For light-curing, use a dental light curing machine intended for use by dental technicians, equipped with halogen lamp, xenon lamp, metal halide lamp and LED lamp, and with an effective wavelength of 400-500 nano-meters. For heat-curing, use a dental heat curing machine which can be set at 110°C for 15 minutes. In cases where other medical curing equipment is to be used, or if you have any questions about curing machines, please feel free to contact us.
2. If this product is used for cases with a high risk of fractures, such as malocclusion or bruxism, the occlusal surface must be metal-coated in order to avoid fracturing.
3. Close the cap promptly and tightly after using this product.
4. Use separate brushes for Primer Paste, Opaque, TWiNY Flow, Stain, Repair Primer, Repair Liquid and Resin Air Barrier.
5. When applying TWiNY body resin, do not push too hard when using a metallic instrument. It may cause the resin to darken, since the inorganic fillers in TWiNY will scrape against the surface of the metal instrument. Plastic instruments or instruments coated with hard materials such as titanium nitride are recommended for TWiNY application.
6. This material is in use on a pallet or on mixing paper, it should be protected by a shade cover.
7. Do not mix body resin with other materials, and do not mix more than one type of body resin to prevent air bubble entrapping and deterioration in quality of material properties.
8. It is technically unproblematic to mix more than two different TWiNY Flow products, but do not mix TWiNY Flow and TWiNY body resin.
9. TWiNY Flow is subject to air bubble formation during mixing. Please mix carefully.
10. Please note that TWiNY Flow has larger polymerization shrinkage than TWiNY body resin.
11. As TWiNY Flow has the property of thixotropy*, the material near the tip of the nozzle can harden and become difficult to push out later. Please pull the piston back about 2mm when storing after use.
12. Stain must be applied on internal layer; please use Enamel or other products after Stain application.
13. Avoid exposures to strong light or sunlight (near windows or laboratory lights, etc.) in order to prevent hardening of paste.
14. Do not use Base on facing part, as Base is designed only for pontic area.
* Thixotropy: the material's viscosity becomes higher as pressure is increased.

Precautions

1. Precautions

- ① Keep Repair Primer, Resin Air Barrier and Resin Separator away from fire.
- ② Provide adequate ventilation (several times per hour).
- ③ When cutting or polishing cured products, use exhaust fan and anti-dust mask as approved by your local public safety agency in order to avoid inhaling dust. Wear safety goggles to protect the eyes.
- ④ Any usages other than those specified in this manual must be avoided.
- ⑤ Do not use this product in combination with other products.
- ⑥ Only adequately certified personnel should handle this product.
- ⑦ Do not operate the syringe at low temperature as it may break. Please use this product at an ambient temperature of around 20°C. For example, if the product is stored at 4°C, leave it for about 20 minutes at 20°C room temperature. 20°C~25°C is the optimal temperature for easy handling.
- ⑧ Storing Resin Air Barrier in the low temperature for long periods of time will increase the viscosity. (In such case, close the cap tightly and place product in hot water for about 5min. to decrease the viscosity.)

2. Important Basic Cautions

- ① Stop using this product immediately if any signs of allergy, such as irritation or rash, appears in patients. If symptoms persist, seek medical attention.
- ② Operators must discontinue use if any signs of irritation or rash appear. If symptoms persist, seek medical attention.
- ③ Do not handle non-cured materials of this product with bare hands. Wear plastic gloves and safety goggles to protect from irritation. Avoid direct contact with skin and eyes. In case of skin contact, wipe with alcohol cotton swabs, and flush with copious running water. In case of eye contact, immediately rinse with copious running water, and seek medical attention.

3. Other Cautions

Crown restoration area may be stained and plaque-adherent depending on patients' dietary habits. Advise daily oral cleaning.

Handling, Storage and Expiry Date

(Handling and Storage)

- ① This product must be stored in out of contact with direct light sources at a temperature of 4-25°C.
- ② Do not store too many products in the same storage area.
- ③ Storage and working areas must be equipped with fire extinguisher(s).
- ④ Keep out of reach of personnel other than dental staff.

Expiry Date

- ① This product must be used before the expiry date printed on the package.
- ② The expiry date printed on the package is based on our authentication.
- ③ The expiry date printed on the package refers to use expiry date.

*(ex.:  YYYY-MM means the last day of YYYY 'year' /MM 'month' as the expiry date)

Intended use and effect / efficacy

This product is a light-and heat-cure type composite resin for dental crown restoration and temporary crowns, such as facing crowns, jacket crowns, and bridges. Do not use this product for other purposes.

[Product Specification]

This Product is a light-cure type composite resin for dental crowns and bridges classified as ISO10477, Dentistry-polymer-based crown and bridge materials that contain a light or UV-sensitive initiator; Type2, Class 2.

Test Method : ISO 10477

	TWiNY Body Resin	TWiNY Flow
Hardness (Hv0.2)	105	77
Flexural Strength (MPa)	239	201
Water Sorption (μg/mm ³)	14	22
Solubility (μg/mm ³)	0.1	0.1

Characteristics

1.Safety

This product conforms to JIS T 6517 (ISO 10993-1), and biocompatibility has been confirmed through evaluation testing.

This product passed our own biological safety tests based on biogenetic, cell and tissue evaluation.

2. Properties

Hybrid indirect composite resin is required a sufficient degree of toughness to be used for molars. Ceramic Cluster technology makes it possible to achieve high flexural strength and fatigue resistance. Moreover, our resin matrix is constructed through nano-technology which has been adopted for our "Luna-Wing", product, making it one of the highest-density filler products on the market.

3. Handling

Opaque Resin is same as our product "Luna-Wing". Its viscosity is carefully calibrated to prevent unnecessary pooling and dripping. Also, brushstrokes do not remain on the product after use.

The consistency of Body Resin is also calibrated to prevent it sticking onto the spatula. This ensures outstanding operability during build-up.

TWiNY Flow has optimal flowability; the consistency is optimally set so as to avoid unnecessary pooling and dripping. TWiNY Flow's nozzle is designed with a 0.7mm opening, so it is suitable for direct application. This property makes it possible to express delicate color tones for reproducing natural tooth appearance.

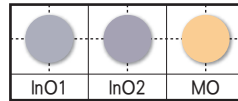
4. Color

Opaque Dentine is available for all basic shades, to improve the restoration of natural teeth. Also, we have a wide range of white shade colors for aesthetic practice treatment. Gum shades are very useful for implant superstructures.

TWiNY Flow is designed in the same color tones as TWiNY Paste type. There are four basic shades for Cervical, and five effect shades for characterization and Transparent layering. There are also eight Translucent shades, and even Gum shades for color adjustment.

Special Opaque Colors

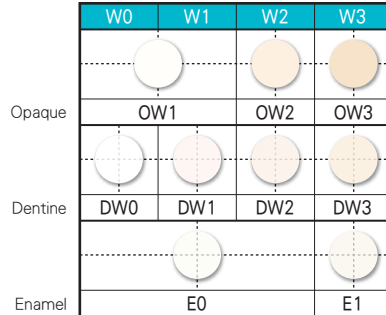
Opaque resin for natural color expression. Use on incisal or cervical area when reflection of Opaque color is strong.



InO1 InO2	Incisal Opaque	InO1 (gray), InO2 (gray, purple) Primer color to give artificial translucency to connector of connected teeth and anterior incisal edge (when there is metal close to incisal edge).
MO	Margin Opaque	Orange and beige color to emphasize cervical color.

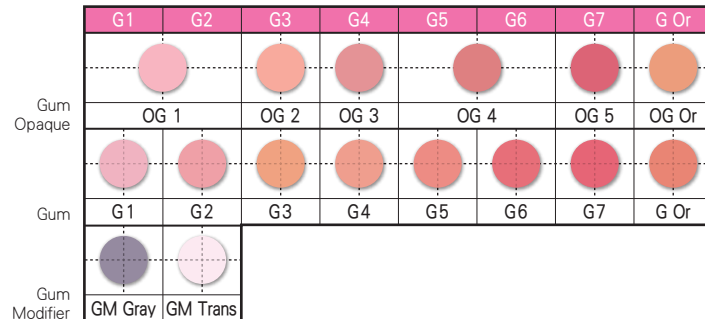
Whitening Shades

Opaque and Dentine to express whiter color tones than the basic shade, A1.



OW1	Whitening Opaque	Whitest Opaque in the lineup.
OW2		White Opaque next to OW1.
OW3		White Opaque between OW2 and OA1.
DW0	Whitening Dentine	Whitest Dentine in the lineup.
DW1		White Dentine next to DW0.
DW2		White Dentine next to DW1.
DW3		White Dentine between DW2 and DA1.

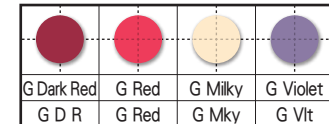
Gum Shades



Characterizing Opaque and Body resin to reproduce gum or express discolored gum, etc.

OG1	Gum Opaque	To express light pink gum.
OG2		To express orange pink gum.
OG3		To express normal orange pink gum.
OG4		To express dark orange pink gum.
OG5		To express dark red gum.
OG Or		To express orange gum.
G1	Gum	Light pink gum color to express gum.
G2		Dark pink gum color to express gum.
G3		Light orange pink gum color to express gum.
G4		Normal gum color to express gum.
G5		Orange pink gum color to express gum.
G6		Dark orange pink gum color to express gum.
G7		Dark red gum color to express gum.
G Or	Orange gum color to express gum.	
GM Gray	Gum Modifier	To express melanin pigment.
GM Trans		To express transparency on the surface of gum.

Gum Stain



Characterizing paste to express discolored teeth. Expresses effective color tone by thin layer application. Apply with a round brush after the light cure of opaque or body resin, and light cure for about 60 sec.

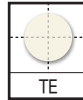
As internal stain, certainly form body resin after the light cure.

*Cannot be used as external stain on surface.

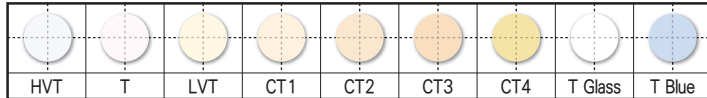
G Dark Red	Gum Dark Red	To express blood vessels
G Red	Gum Red	To accent redness of gum
G Milky	Gum Milky	To reproduce dental alveoli and white bands
G Violet	Gum Violet	To express melanin pigment.

Trans Enamel

To express transparency or translucency between Translucent and Enamel.



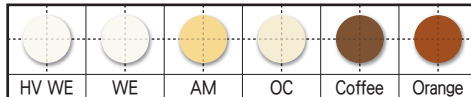
Translucent



Body resin to express translucency.

HVT	High Value Translucent	Translucent with high brightness
T	Translucent	Normal translucent
LVT	Low Value Translucent	Translucent with low brightness
CT1	Cervical Translucent	Light orange and pink translucent for gum color. For cervical area expression.
CT2		Light orange and pinkish translucent for cervical area.
CT3		Orange translucent for cervical area.
CT4		Yellowish translucent for cervical area.
T Glass	Translucent Glass	Translucent with highest transparency in the lineup.
T Blue	Translucent Blue	Blue Translucent for incisal edge.

Effect

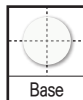


Characterizing Body resin to express discolored teeth

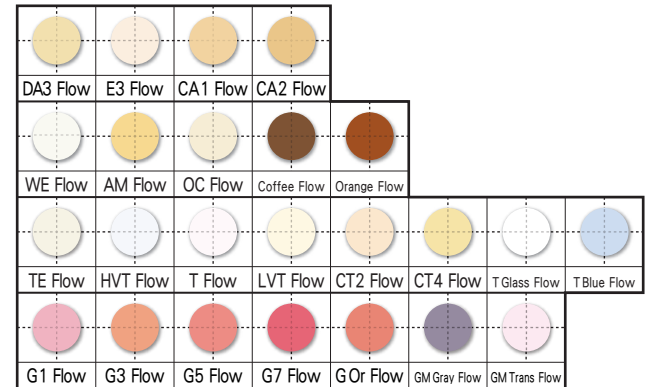
HV WE	High Value White Enamel	Enamel Color with higher intensity (whiter) than WE
WE	White Enamel	Enamel color with high intensity. To express proximal surface and white bands. Whiter than E0 and not as transparent as Enamel E0.
AM	Amber	To express orangish translucent (amber color)
OC	Occlusal	Very light orange color for occlusal area of molars.
Coffee	Coffee	To accent brown color like coffee.
Orange	Orange	To accent orange color

Base

Body resin as base to fill pontic part of bridge, etc.
Translucent color with deep light-cure depth designed only for pontic part.
It cannot be used on facing part.



TWiNY Flow



TWiNY Flow is designed in the same color tones as TWiNY Paste type. There are four basic shades for Cervical, five Effect shades for characterization and Transparent layering. There are also eight Translucent shade and even Gum shades for color adjustment. TWiNY Flow has optimal flowability, the consistency is optimally set so as to avoid unnecessary dripping. This property makes it much easier to express delicate color tones for reproducing natural tooth appearance than it would be using Paste type. Even though it is a flow type, it exhibits over 200MPa flexural strength and the hardness is about 80HV, which means high impact resistance. It enables TWiNY Flow to be used as a characterizing item for occlusal surface of molars. TWiNY Flow is useful for cases such as applying to cervical area and cavity bottoms, the color expression of pits and fissures, building up Enamel ridges, adjusting color tones of gingival area, repairing air bubbles, pouring in pontic area, etc.

Luna-Wing Primer Paste

Primer Paste is a bonding primer material for non-precious alloys. It cannot be used on gold alloys.

Repair Primer (Repair Primer for non-precious alloys for additional build-up)

Before building up additional layers for repair purposes, Repair Primer should be applied on the surface of the resin in order to improve the adhesive strength. Apply Repair Primer first and then apply Repair Liquid.
*Applying too much Repair Primer may lower the bonding strength. Apply it with a brush as thinly as possible.
*This product is a flammable liquid, and is exported as a hazardous product.

Repair Liquid

For additional build-up after shape modification, apply Repair Liquid after Repair Primer. This improves adaptability between the hardened surface of the resin and the newly-applied resin.

C&B Resin Spacer

This product is a resin spacer which substantially resolves the issue of the unpleasant smell of natural rubber spacers. It provides an ideal space for cementing between a Jacket Crown and an abutment tooth. This product can cope with the most demanding dental techniques.
Apply Resin Spacer on a plaster model (except the margin area) to form a film. This space secures the thickness of the cement and it also prevents the jacket crown sticking on the plaster model due to resin curing shrinkage.

C&B Resin Separator

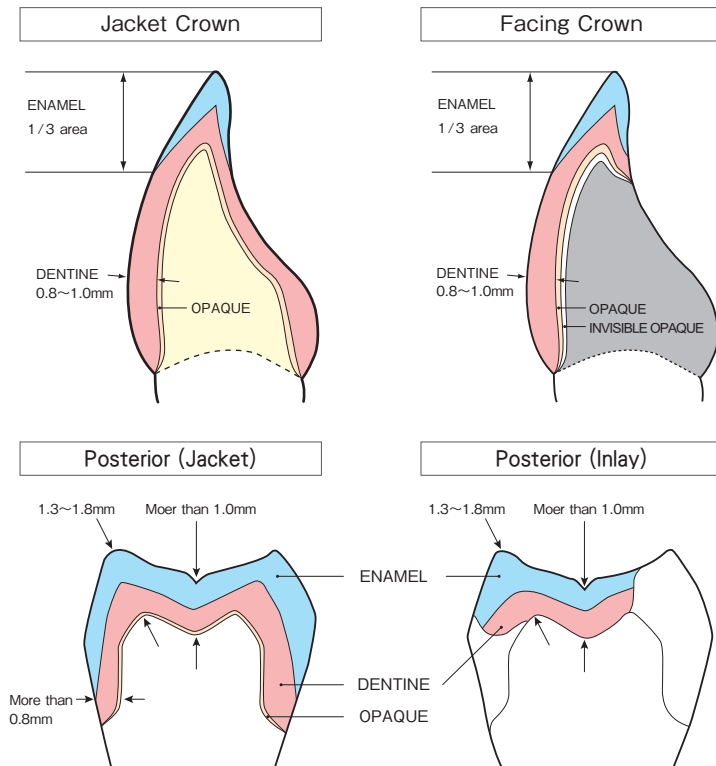
This is a mold releasing product. It provides for the easier removal of jacket crown mold. This product can cope with the most demanding dental techniques.
Apply Resin Separator on margin area or cavity area of a plaster model evenly and completely and dry. Then apply composite resin TWiNY and light cure it. If there is an undercut area in the cavity, block it out with wax before application.

Curing Schedule

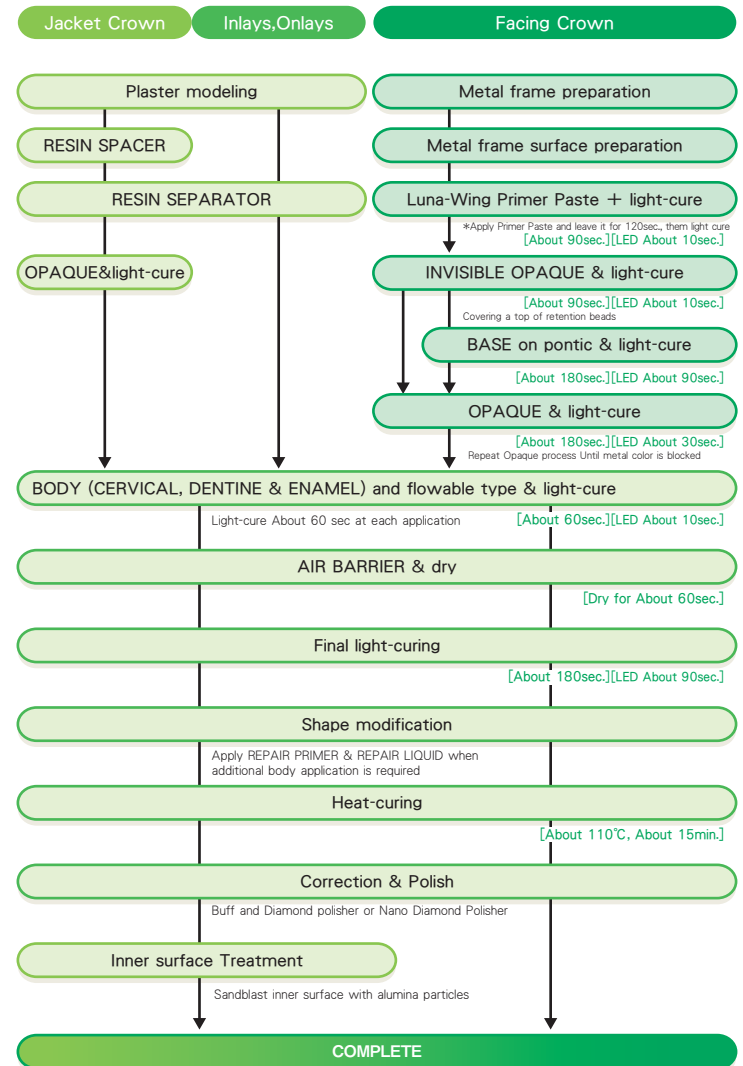
Light curing and heat curing schedule is as follows;

Name	Conventional Curing Time	Yamakin LED CURE Master
Luna-Wing Primer Paste	About 90 sec.	About 10 sec.
Invisible Opaque	About 90 sec.	About 10 sec.
Opaque	About 180 sec.	About 30 sec.
Body Resin/TWiNY Flow	About 60 sec.	About 10 sec.
Base	About 180 sec.	About 30 sec.
Final Light Curing	About 180 sec.	About 90 sec.
Heat Curing	About 110°C, About 15 Min.	

Basic Layering Technique



TWiNY Basic Layering Step



Basic Build-up Layering for Jacket Crown

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

1. Resin Spacer Application

Make a plaster model in accordance with normal practice.
Apply TWiNY Resin Spacer on surface, except margin area, and dry.



2. Resin Separator Application

For easier removal of jacket crown mould, apply TWiNY Resin Separator thinly on margin area, and dry.



3. Opaque Application and Light Curing

Apply Opaque with a flat brush and light cure for about 180 sec. If metal color is still seen, repeat this step until the metal color is completely concealed.



4. Cervical (Opaque Dentine) Application and Light Curing

Apply Cervical or Opaque Dentine starting from the neck to the central area and applying progressively thinner, taking subsequent color gradation into consideration. Light cure for about 60 sec.



5. Dentine Application and Light Curing

Apply Dentine to form the required dentine core shape and light cure for about 60 sec.
Using Body Resin Flow makes it easier to layer cervical area and cavity bottom.



6. Enamel Application and Light Curing

Apply Enamel to form the required crown shape and light cure for about 60 sec.

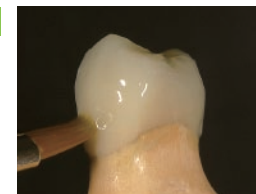
7. Translucent Application and Light Curing

In cases where Translucent is required, apply Translucent and light cure for about 60 sec.
Using Body Resin Flow can avoid entrapping of air and makes it easier to create delicate color tones and shaping.



8. Final Light Curing

After final layering, apply TWiNY Resin Air Barrier as thinly as possible to avoid immature curing and leave it for about 60 sec. to dry. Then light cure it for about 180 sec. as a final light curing. If Air Barrier is applied thickly, it is difficult to dry. The brush used to apply Air Barrier should be washed with water after use.



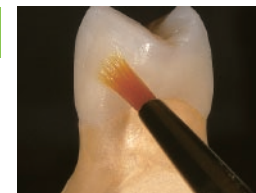
9. Corrections to Shape

Correct the shape using a carborundum or diamond point.



10. Additional Layering Preparation after Corrections to Shape (1)

In cases where additional layering after correcting the shape is needed, apply Repair Primer thinly with a brush on grained corrected surface and leave it for about 60 sec. to dry.



Basic Build-up Layering for Jacket Crown

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

11. Additional Layering Preparation after Corrections to Shape (2)

Apply Repair Liquid thinly on the same area.



12. Additional Build-up Layering

Apply composite resin such as Dentine or Enamel correspondingly and light cure. Apply TWiNY Air Barrier on the additional layering area, then light cure for about 180 sec. as a final curing. Again correct and adjust the shape to finish.



13. Heat Curing

Remove the jacket crown from the plaster model and heat cure it at about 110°C for about 15 minutes using a heat curing machine.



14. Finishing

Remove any scars with paper cone and silicone point to make the surface smooth.



15. Glazing

Polish for glazing by using brush or fabric buff with C&B Diamond Polisher or C&B Nano Diamond Polisher.



16. Internal Treatment to Finish

Finally, sand-blast (about 0.1 ~ 0.2Mpa) the inside of the jacket crown using alumina powder (about 50 μ m), then use steam cleaner or ultrasonic cleaner to wash, and then dry.

When the jacket crown is placed in the mouth, apply Repair Primer thinly and dry before applying cement on the jacket crown. This improves the bonding strength.



Basic Build-up Layering for Inlay and Onlay

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

1. Preparation for Layering

Make a plaster model in accordance with normal practice.
If there are under-cut spaces in the cavity, block them out using TWINY Resin Spacer.



2. Resin Separator Application

Apply C&B Resin Separator in the cavity and dry.



3. Dentine Application and Light Curing

Apply Dentine from the cavity bottom and light cure for about 60 sec. In case the abutment color is required to be concealed, or light goes through unnecessarily, apply Opaque or Opaque Dentine at the bottom of the cavity. Using Body Resin Flow makes it easier to layer cervical area and cavity bottom.



4. Cervical Translucent* Application and Light Curing

Apply Cervical Translucent* at the occlusal surface of the cavity and light cure for about 60 sec.

*CT1, CT2, CT3 and CT4



5. Enamel Application and Light Curing

Apply Enamel to form the required crown shape and light cure for about 60 sec.

Using Body Resin Flow can avoid entrapping of air and makes it easier to create delicate color tones and shaping.



6. Final Light Curing

After final layering, apply TWINY Resin Air Barrier as thinly as possible to avoid immature curing and leave it for about 60 sec. to dry. Then light cure it for about 180 sec. as a final light curing. If Air Barrier is applied thickly, it is difficult to dry. The brush used for Air Barrier should be washed with water.



7. Corrections to Shape

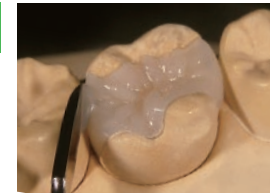
Correct the shape using a carborundum or diamond point.



8. Additional Layering Preparation after Corrections to Shape (1)

In cases of additional layering after correcting the shape, apply Repair Primer thinly with a brush on grained corrected surface and leave it for about 60 sec. to dry. Then apply Repair Liquid thinly on the same area. Then apply composite resin such as Dentine or Enamel correspondingly. Apply TWINY Air Barrier on the additional layering area, then light cure for about 180 sec. as a final curing. Again correct the shape to finish.

(These steps are the same as for Jacket Crown, page 10 to 12.)



9. Heat Curing

Remove Inlay or Onlay from the plaster model and heat cure it at about 110°C for about 15 minutes using a heat curing machine.



10. Finishing

Remove any scars with paper cone and silicone point to make the surface smooth.

In cases where color tone adjustment is required, use Stain or Effect.

*If Stain is used, Translucent or T Glass should be used to cover Stain area.



Basic Build-up Layering for Inlay and Onlay

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

11. Glazing

Polish for glazing by using brush or fabric buff with C&B Diamond Polisher or C&B Nano Diamond Polisher.



12. Internal Treatment to Finish

Finally, sand-blast (about 0.1 ~ 0.2Mpa) the inside of the jacket crown using alumina powder (about 50 μ m), then use steam cleaner or ultrasonic cleaner to wash, and then dry.

When the jacket crown is placed in the mouth, apply Repair Primer thinly and dry before applying cement on the jacket crown. This improves the bonding strength.



Basic Build-up Layering for Facing Crown, Bridges and Gum

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

1. Preparation for Layering

PMake a plaster model in accordance with normal practice. Make the crown shape using wax, and make spaces between crowns; then apply bonding material and retention beads on facing part to make wax pattern (mould of metal frame). Then cast the metal following product instructions.

Use 100 μ m - 200 μ m particle size retention beads.



2. Alumina Treatment of Metal Frame

Sand-blast (about 0.2 ~ 0.25Mpa) the surface using alumina powder (about 50 μ m); then use steam cleaner or ultrasonic cleaner to wash. Then dry.

3. Primer Paste and Light Curing

Apply Primer Paste with a flat brush or a small round brush thinly and evenly and leave it for about 120 sec. to dry. Then light cure for about 90 sec. (For Non-precious Metals)



4. Invisible Opaque Application and Light Curing

Apply Invisible Opaque with a flat brush to cover the retention beads, filling the gaps between beads. Light cure for about 90 sec.



5. For Pontic Part Application

For pontic part, apply invisible opaque and light cure for 180 sec.; then apply base and light cure for about 180 sec. Apply Opaque and light cure for about 180 sec.

6. Opaque Application and Light Curing

(Facing Crown)

Apply Opaque with a flat brush and light cure for about 180 sec. In cases where metal color is visible, repeat this step until the color is concealed. If the transparencies of incisal area or color tones of cervical area need to be emphasized, use Opaque Special Color.

Basic Build-up Layering for Facing Crown, Bridges and Gum

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

7. Gum Opaque Application

To reproduce gingival area, use Gum Opaque to conceal the metal color. Apply Gum Opaque and light cure for about 180 sec. If required, use Gum Stain to characterize. Gum Stain should not be used for surfaces, but is to be used between layers.



8. Cervical Application and Light Curing

(Facing Crown)

Apply Cervical or Opaque Dentine starting from the neck to the incisal area, applying progressively thinner, taking subsequent color gradation into consideration. Light cure for about 60 sec.

9. Dentine Application and Light Curing

Apply Dentine to form the required dentine core shape and light cure for about 60 sec.
Using Body Resin Flow makes it easier to layer cervical area and cavity bottom.

10. Enamel Application and Light Curing

Apply Enamel to form the required crown shape and light cure for about 60 sec.

11. Translucent Application and Light Curing

In cases where Translucent is required, apply Translucent and light cure for about 60 sec. For the intermediate color expression between Translucent and Enamel, apply Translucent Enamel. For discoloring expressions, apply Effect partially.

Using Body Resin Flow can avoid entrapping of air and makes it easier to create delicate color tones and shaping.

12. Gum Application and Light Curing

Apply Gum and light cure for about 60 sec. to reproduce gingival area. In order to express Melanin pigment or transparency of surface layer, apply Gum Modifier and light cure for about 60 sec.

Using Body Resin Flow makes it easier to layer cervical area and cavity bottom.

*In cases where Gum is used for a wide range of connected teeth, application should be carried out one by one individually to avoid deformation of the metal frame caused by curing shrinkage.



13. Final Light Curing

After final layering, apply TWiNY Resin Air Barrier as thinly as possible to avoid immature curing and leave it for about 60 sec. to dry. Then light cure it for about 180 sec. as a final light curing. If Air Barrier is applied thickly, it is difficult to dry. The brush used for Air Barrier should be washed with water.



14. Corrections to Shape

Correct the shape using a carborundum or diamond point.



15. Additional Layering Preparation after Corrections to Shape

In cases of additional layering after correcting the shape, apply Repair Primer thinly with a brush on grained corrected surface and leave it for about 60 sec. to dry. Apply Repair Liquid thinly on the same area. Apply composite resin such as Dentine or Enamel correspondingly and light cure. Apply TWiNY Air Barrier on the additional layering area, then light cure for about 180 sec. as a final curing. Again correct the shape to finish. (Same steps as for Jacket Crown)



16. Heat Curing

Remove the facing crown or bridges from the plaster model and heat cure at about 110°C for about 15 minutes using a heat curing machine.



17. Finishing

Remove any scars with paper cone and silicone point to make the surface smooth.



Basic Build-up Layering for Facing Crown, Bridges and Gum

*Conventional curing time is indicated in the following steps.
In case, The LED CURE Master is used, please confirm "Curing Schedule" on page 11.

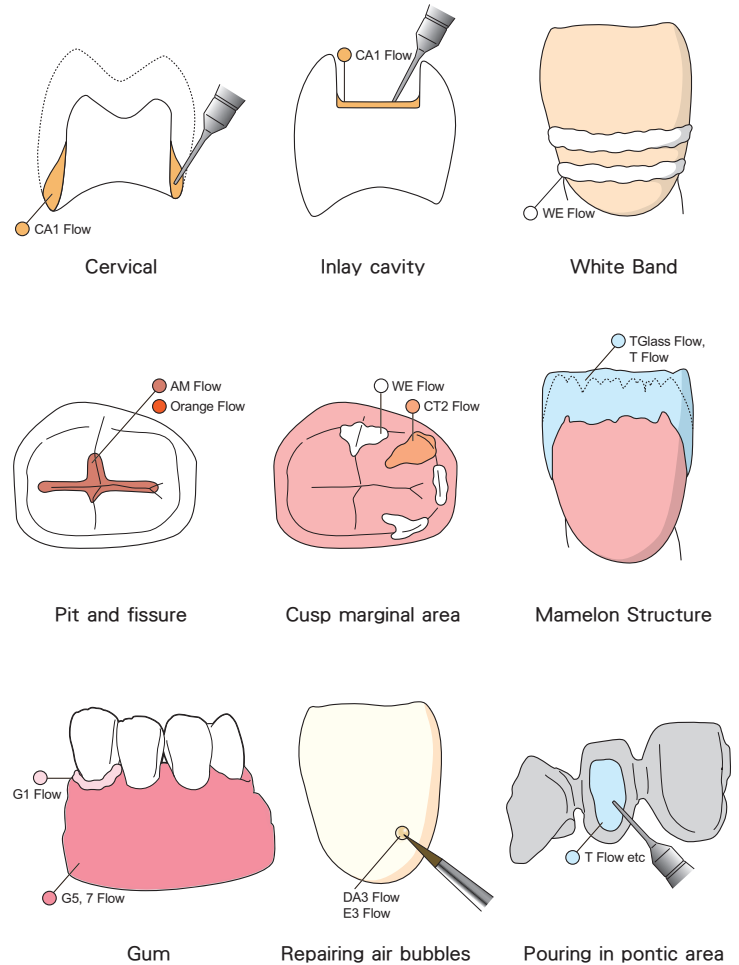
18. Glazing

Polish for glazing by using brush or fabric buff with C&B Diamond Polisher or C&B Nano Diamond Polisher to finish.



TWiNY Flow Application Examples

TWiNY Flow is useful for the cases listed below. However, since this product was mainly designed for color tone adjustment, please use TWiNY Opaque, Dentine and Enamel for basic applications.



1. Cervical Application (CA1 Flow)

TWiNY Flow can be applied directly from the syringe in order to save working time. For making small adjustments, use a brush or a spatula. Be careful not to apply too thickly.



2. Apply Paste Resin (DA3)

For Dentine application, use Paste type, Dentine (DA3). For basic shade application or for thick layering, use paste type as it is subject to less shrinkage.



3. Color Expression of Molar Center (Orange Flow)

Adjust the base color tone of molar center.



4. Application of Ridges or Streamlines of Occlusal Surface (TE Flow, CT2 Flow)

Apply TWiNY Flow on occlusal surface. Apply ridges or streamline using a spatula or a brush.



5. Color Blend of TWiNY Flow (Orange Flow, CT2 Flow, T Flow)

Blend TWiNY Flow to express color tone.
*Take due care to mix them carefully because if air bubbles are entrapped, the strength will be lowered.
TWiNY Flow and TWiNY Paste Resin cannot be mixed.



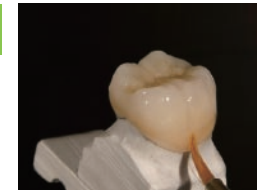
6. Color adjustment of Pits and Fissures

TWiNY Flow can express the color tone of the surface layer, which Stain cannot. Use TWiNY Flow to adjust the color of pits and fissures.



7. Color Adjustment of Cervical Area (Orange Flow, CT2 Flow)

Use TWiNY Flow to adjust the color tone of cervical area. As TWiNY Flow can be applied thinly, it is easy to make minor adjustments.



8. Color Adjustment of Cusp Top and Marginal Area (WE Flow, CT2 Flow)

WE Flow and CT2 Flow are used for color adjustment of cusp top and marginal area.



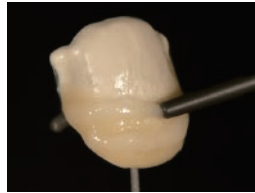
9. Completion of Color Adjustment of Molar Jacket Crown

As TWiNY Flow has optimal flowability, it can reproduce the natural shape of ridges and streamlines when the molar jacket crown is made. As these products can be applied on surface layer, it makes it possible to perform esthetic expressions at a higher level.
After color adjustment, the same light curing steps as for TWiNY Paste Type are required. After final layering, apply TWiNY Air Barrier and carry out final light curing and heat curing.



1. White Band Application of Facing Crown (WE Flow)

Use WE Flow to express white band of facing crown. Direct application can shorten working time.



2. Dentine Application (DA3)

For Dentine application, use Paste type, Dentine (DA3). For basic shade application or for thick layering, use paste type as it is subject to less shrinkage.



3. Expression of Translucent Layer (T Glass Flow)

Apply T Glass Flow between mamelon structures. As it is of the flowable type, air bubble entrapping can be strained.



4. Color Blend of TWiNY Flow (T Flow, CT2 Flow, CT4 Flow, T Blue Flow, GM Gray Flow)

Blending colors of TWiNY Flow makes it easier to express color tone of transparency, while it is difficult to do so using Stain. Take due care to mix them carefully because if air bubbles are entrapped, the strength will be lowered.



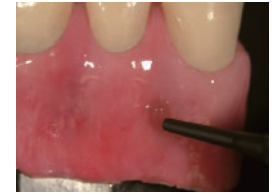
5. Color Tone Expression of Mesiodistal Incisal Area (T Blue Flow)

As a color expression of mesiodistal incisal area, apply T Blue Flow with a brush. For expression of center incisal area, apply AM Flow and Orange Flow. At the same time, adjust the color of cervical area. After translucent layering, in the same way, apply E3 paste resin for color adjustment of cervical area.



1. Expression of Melanin Pigment (GM Gray Flow)

After applying Paste type such as G1 ~ G7, apply TWiNY Flow to express the coloration of melanin pigment.



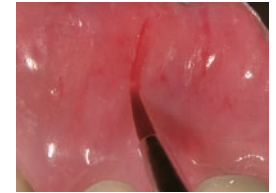
2. Color Adjustment of Cervical Area (G1 Flow)

Expressing the lighter color of cervical area is easier with TWiNY Flow.



3. Expression of Blood Vessels (G Dark Red)

For expressing blood vessels of gingival area, use Stain; however, Stain cannot be used for surface layer, so apply TWiNY Flow (GM Trans Flow) on top of the Stain color.



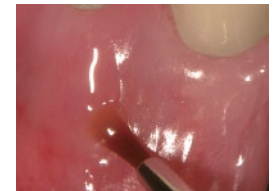
4. Blending Colors (T Flow, CT2 Flow, GM Gray Flow)

To reproduce the intricate color tones of gingival area, mix to reproduce natural textures. Take due care to mix carefully, because if air bubbles are entrapped, the strength will be lowered.



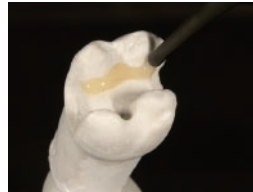
5. Color Adjustment of Gingival Area

TWiNY Flow makes it possible to express deep natural gradation color tones of gingival area, which can be used for purposes such as superstructure of implant.



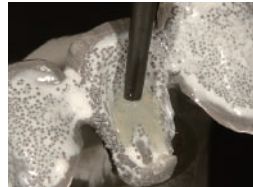
1. Application of Cavity Bottom of Inlay

As TWINY Flow has good flowability, it blocks cavities well and working time can be shortened.
Be careful not to apply too thickly, taking curing shrinkage into consideration.



2. Pouring in the Pontic Area

Optimal flowability makes it easier to pour in pontic area.



[Cautions]

As TWINY Flow has the property of thixotropy*, please pull the piston back about 2mm when storing after use in order to avoid the following:

- * Resin left at the tip of nozzle hardens and it makes it difficult to use next time.
- * Handling may be different at the beginning and end of use.
- * Resin may leak due to pressure.
- * Thixotropy: the material's viscosity becomes higher as pressure is increased.

1. Features of polishers

- C&B Diamond Polisher
C&B Diamond Polisher has not only excellent abrasive performance, but is also highly effective for removing scars caused during polishing. These characteristics shorten the working time. Use it at a rotating speed lower than 10,000 rpm.
- C&B NANO Diamond Polisher
C&B NANO Diamond Polisher contains fine diamond particles at a 60% concentration, enabling high-precision polishing. It can be used at 20,000rpm rotating speed. The rotating speed of C&B NANO Diamond Polisher is different from that of C&B Diamond Polisher.



Polisher	Diamond Particles (μm)	Rotating Speed (rpm)
C&B Diamond Polisher	1 ~ 2	10,000 and less
C&B NANO Diamond Polisher	Less than 0.5	20,000 and less

2. Polishing occlusal surface of posterior tooth

Remove scars on the surface by sand grinding/polishing, or using silicone. Then use a Robinson Brush to polish with a small amount of a polisher. In the case of C&B Diamond Polisher, use it at a rotation speed lower than 10,000rpm (8,000rpm is recommended.), In the case of C&B NANO Diamond Polisher, use the product at a rotation speed lower than 20,000rpm (15,000 rpm is recommended.)



3. Finishing

Apply a little C&B Diamond Polisher or C&B NANO Diamond Polisher on a fabric buff, and polish all over the crown to make the surface smooth.

