

# DiaDent Group International

Passion for Innovation ● ● ●



# CONFIDENCE IN COMPOSITES

DiaDent ensures maximum durability and highest patient satisfaction with innovative products-highly esthetic restorative materials, efficient bonding agents and high-performance curing lights.

## COMPOSITES



### MICRO HYBRID COMPOSITE

#### DIAFIL™

- A Light cure, esthetic restorative micro hybrid composite resin



### FLOWABLE COMPOSITE

#### DIAFIL™ FLOW

- Light cured flowable restorative composite resin



### SELF-CURING COMPOSITE

#### DIAFIL CORE™

- Self-curing composite for core build-up



### CORE BUILD-UP COMPOSITE

#### DIAFIL CORE™ AUTOMIX

- Dual cured core build-up composite



## ADHESIVES

### TOTAL-ETCH

#### DIAETCH™

- 37% etching gel phosphoric acid

#### DIAPLUS™

- Single component bonding agent



### SELF-ETCH

#### DIA-PLUS™ G7

- Single component self-etching light cured bonding agent



## CURING LIGHT

**D-LUX**  
- Cordless LED curing light



## TEMPORARY FILLING

**DIA-TEMP™**  
- Visible, light cured temporary filling material



## CEMENT

**DiaCem™ TempNE**  
- Non eugenol temporary cement



## SEALANT

**DIASEAL™**  
- Light cured pit & fissure sealant



# DIAFIL™

Light Cured Restorative Micro Hybrid Composite

## FEATURES & BENEFITS

### ● Excellent Handling

- Very easy handling of acceptable viscosity
- No sticking to instruments virtually
- Good marginal adaptation makes in easy to shape
- Has good modeling properties

### ● Speedy and Short Polymerization Time

- Can be polymerized in only 20 seconds

### ● Outstanding Versatility

- Very useful for Anterior and Posterior restorations

### ● Superior Physical Properties- Low Wear & High Fracture Resistance

- Unique fillers reduced shrinkage for less post-operative sensitivity and secondary cavities due to leakage
- Excellent fracture toughness, high tensile, compressive strengths for long lasting results

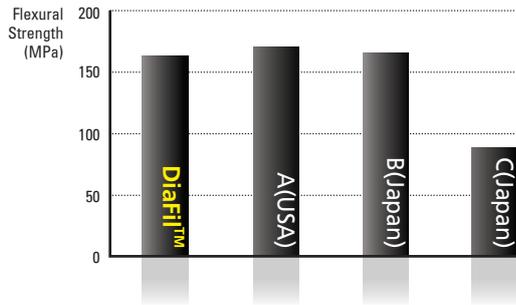
### ● Natural Esthetics

- Remarkable color stability and superior quality of esthetics
- Available in 12 shades matching with tooth structure to make it easy to finish and polish

### ● High Level of Radiopacity

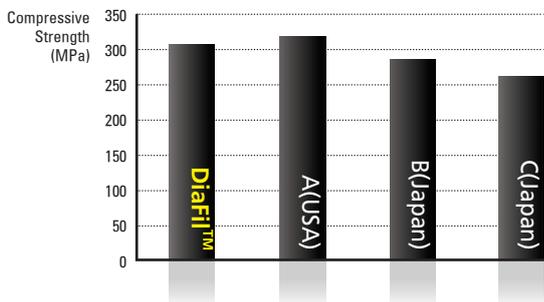
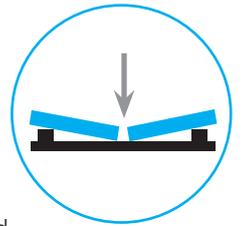


# PHYSICAL PROPERTIES



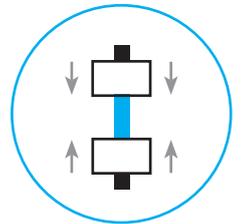
## Flexural Strength

The flexural strength is measured by pressing a stick-typed experimental material. Flexural strength is the value obtained when the sample breaks, fixing both ends of sample and pressing in the middle of it. This test combines the forces found in compression and tension. DIAFIL™ shows a similar level of strength with other brands.



## Compressive Strength

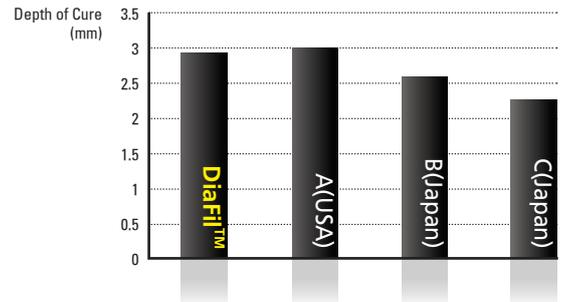
Compressive strength is particularly important because it is related with masticating forces. Rods are made of the material and simultaneous forces are applied to the opposite ends of the sample length vertically. The sample failure is a result of shear and tensile forces. DIAFIL™ is statistically higher than other 2 brands.



## PHYSICAL PROPERTIES

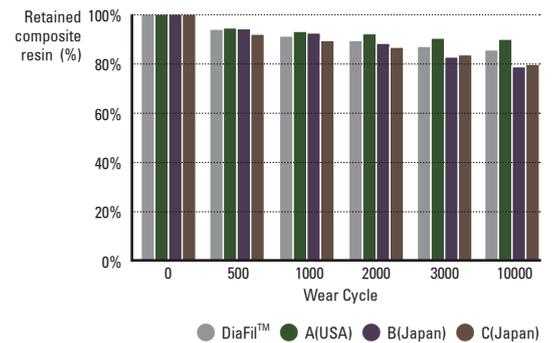
### Depth of Cure

The depth of cure of composite resin is affected by many factors as like content, size and shape of inorganic filler. Also it is affected by shade of composite resin, curing time, intension of light and distance between composite resin and curing device. DIAFIL™ is statistically higher than other 2 brands.



### Abrasive, Wear Resistance

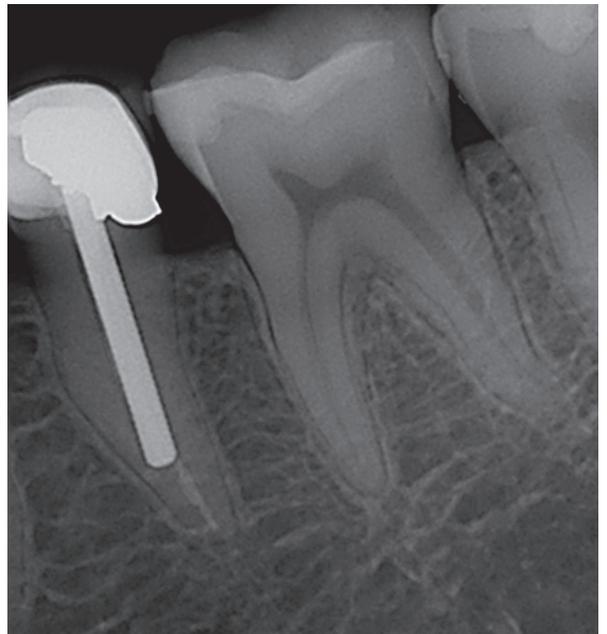
Abrasion is losing materials gradually from the surface by relative movement. The surface contact of two objects occurs friction force and finally the loss of materials. DIAFIL™ shows a similar level of abrasive resistance compared with other brands.



### • POSTERIOR RESTORATION



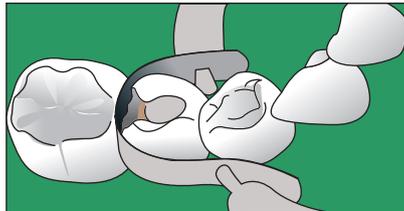
### • HIGH RADIOPACITY



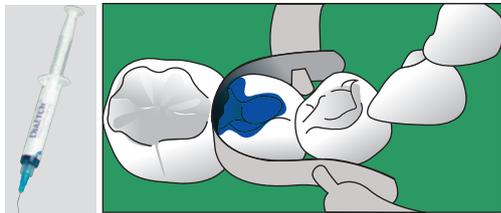
### • ANTERIOR RESTORATION



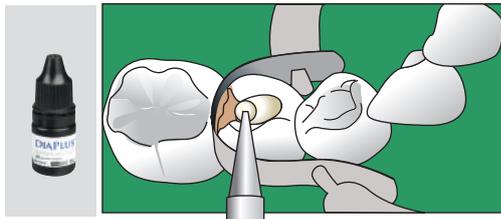
## TECHNIQUE GUIDES



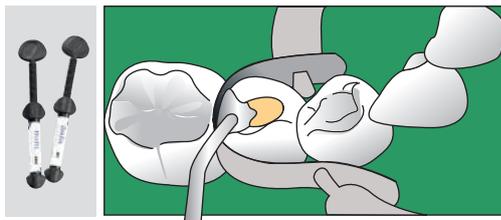
1. Prepare the tooth : Isolate the tooth with rubber dam and clean the tooth



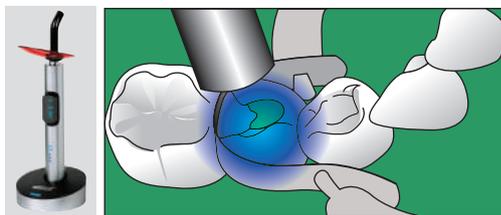
2. Etch : Apply Dia-Etch(etchant) to enamel and dentin and wait 15 seconds. Rinse and blot the excess water, leaving tooth moist



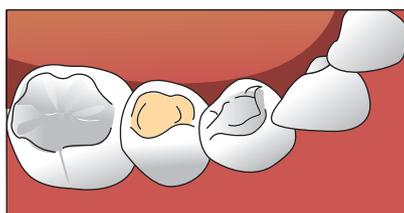
3. Bond : Apply 3 consecutive coats of Dia-Plus (bonding agent) to enamel and dentin and wait 15 seconds. Dry gently for 3 seconds and light cure for 20 seconds



4. Place composite resin : Place DIAFIL™(composite resin) in layers less than 2.0mm



5. Light Cure : Cure each increment for 20 seconds



6. Finish and Polish

# DIAFIL™

## ORDERING INFORMATION

### ● Start Kit

- 4g × 5 composite resin syringes
- 1 Bottle bonding agent(5ml)
- 1 Etching gel syringe(3ml)
- Accessories : 50 brush tips, 1 brush handle, mixing well, mixing pad, 10 disposable needle tips, shade sheet

SET	COMPOSITE SHADES	ITEM NO.
START KIT A SET	A1, A2, A3, A3.5, B2	2001-1101
START KIT B SET	A2, A3, A3.5, B2, B3	2001-1102
START KIT C SET	A1, A2, A3, A3.5, C2	2001-1103

### ● Accessories

20 x disposable tips for DiaEtch	2001-6103
100 x disposable tips for DiaEtch	2001-6109
100 x brush tips for DiaPlus	2001-6104
1 x brush handle	2001-6105
Mixing pad	2001-6106
Mixing well	2001-6107

### ● Refill Package

- 1 syringe × 4g

A1	2001-1201
A2	2001-1202
A3	2001-1203
A3.5	2001-1204
A4	2001-1205
B1	2001-1206
B2	2001-1207
B3	2001-1208
C2	2001-1210
C3	2001-1211
A20	2001-1212
A30	2001-1213

### ● Capsule Type

- 0.25g capsule × 20ea

A1	2001-1405
A2	2001-1401
A3	2001-1402
A3.5	2001-1403
B2	2001-1404



Start Kit



Refill Package



Capsule Type

# DIAFIL™ FLOW

Light Cured Flowable Restorative Composite

## FEATURES & BENEFITS

### ● Perfect Adaptation and Handling

- Has a high level of fluoride release with no slump, run which helps a fast techniques and handling
- The superior combination of a flowing viscosity offers easy and convenient placement for safe and durable restorations

### ● Various indications for use in the following types of restorations

- ▶ Restorations of minimally invasive cavity preparations
  - Class III, V and shallow class IV
  - Air abrasion preparations
  - Tunnel preparation
- ▶ Base/liner under posterior restorations in Class I, II
- ▶ Repair of small defects in aesthetic indirect restorations
  - Composite
  - Ceramic
- ▶ Undercut blockout
- ▶ Pit and fissure sealant
- ▶ Repair of acrylic temporary materials

### ● Excellent Color Adaptability

- Micro Hybrid fillers provide natural esthetics and high-gloss polishability

### ● High tensile strength, Low Shrinkage and High Radiopaque

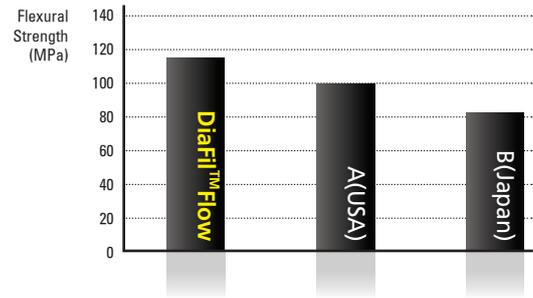
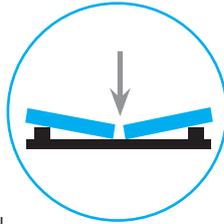


# DIAFIL™ FLOW

## PHYSICAL PROPERTIES

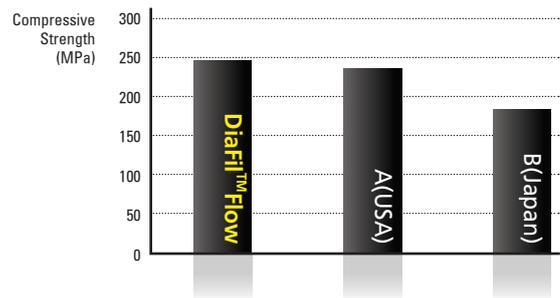
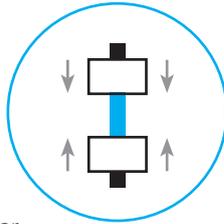
### Flexural Strength

The flexural strength is measured by pressing a stick-typed experimental material. Flexural strength is the value obtained when the sample breaks, fixing both ends of sample and pressing in the middle of it. This test combines the forces found in compression and tension. DIAFIL™ FLOW shows statistically higher than other 2 brands.



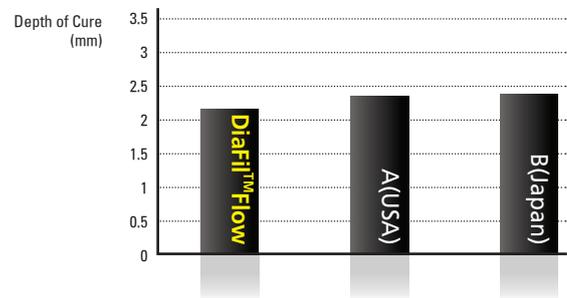
### Compressive Strength

Compressive strength is particularly important because it is related with masticating forces. Rods are made of the material and simultaneous forces are applied to the opposite ends of the sample length vertically. The sample failure is a result of shear and tensile forces. DIAFIL™ FLOW is statistically higher than other brand.



### Depth of Cure

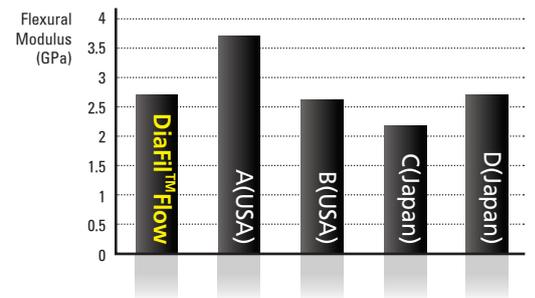
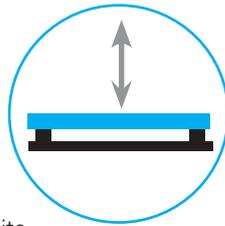
The depth of cure of composite resin is affected by many factors as like content, size and shape of inorganic filler. Also it is affected by shade of composite resin, curing time, intensity of light and distance between composite resin and curing device. DIAFIL™ FLOW shows a similar level of depth with other flowable composite resins.



## Flexural Modulus

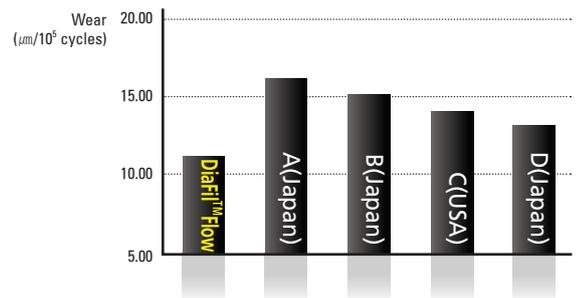
Flexural modulus is a method of defining a material's stiffness.

A low modulus indicates high flexible material. DIAFIL™ FLOW shows a similar flexural elastic rate with other flowable composite resins.



## Abrasion resistance, wear

Abrasion is losing materials gradually from the surface by relative movement. The surface contact of two objects occurs friction force and finally the loss of materials. DIAFIL™ FLOW shows the lowest abrasion level comparison to other products.



### ● RESTORATION WITH DIAFIL™ FLOW



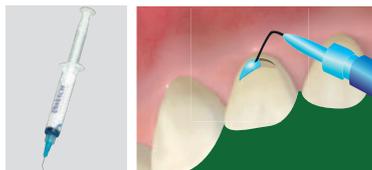
# DIAFIL™ FLOW

## TECHNIQUE GUIDES

### ● Direct Restorations



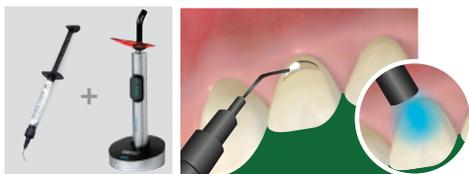
1. Prepare the tooth : Isolate the tooth and remove caries



2. Etch : Apply Dia-Etch(etchant) to enamel and dentin and wait 15 seconds. Rinse and blot the excess water, leaving tooth moist



3. Bond : Apply 2 consecutive coats of Dia-Plus(bonding agent) to enamel and dentin and wait 15 seconds. Dry gently for 3 seconds and light cure for 20 seconds

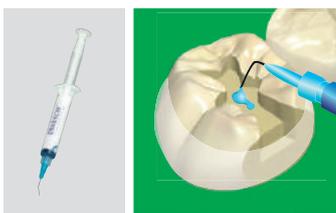


4. Place Flowable composite resin :  
Place DIAFIL™ FLOW(flowable composite resin) in layers less than 2.0mm and cure each increment for 20 seconds

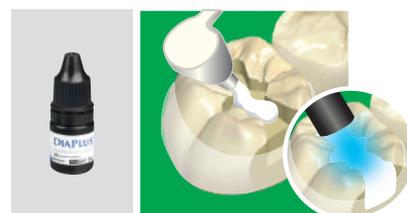


5. Finish and Polish

### ● Base/Liner Direct Posterior Restorations



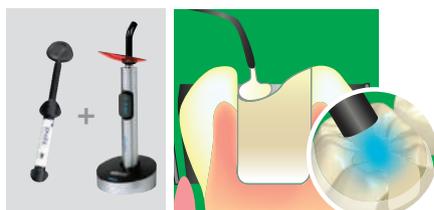
1. Prepare the tooth : Isolate the tooth and remove caries  
2. Etch : Apply Dia-Etch(etchant) to enamel and dentin and wait 15 seconds. Rinse and blot the excess water, leaving tooth moist



3. Bond : Apply 2 consecutive coats of Dia-Plus(bonding agent) to enamel and dentin and wait 15 seconds. Dry gently for 3 seconds and light cure for 20 seconds



4. Place Flowable composite resin :  
Place DIAFIL™ FLOW(flowable composite resin) in layers less than 2.0mm and cure each increment for 20 seconds



5. Place Restorative composite resin :  
Place DIAFIL™(composite resin) in increments and cure each increment for 20 seconds.



6. Finish and Polish

## ORDERING INFORMATION

### ● Economic Package

- Flowable Resin 2g x 4 syringes
- 40 disposable tips(black)
- Shade Sheet

A1	2001-4101
A2	2001-4102
A3	2001-4103
A3.5	2001-4104
B2	2001-4105
B3	2001-4106
C2	2001-4107
A20	2001-4108
A30	2001-4109

### ● Refill Package

- Flowable Resin 2g x 1 syringe
- 10 disposable tips(black)

A1	2001-4201
A2	2001-4202
A3	2001-4203
A3.5	2001-4204
B2	2001-4205
B3	2001-4206
C2	2001-4207
A20	2001-4208
A30	2001-4209

### ● Accessories

20 x disposable tips for DiaFil Flow	2001-6102
100 x disposable tips for DiaFil Flow	2001-6108



# DIAPLUS™

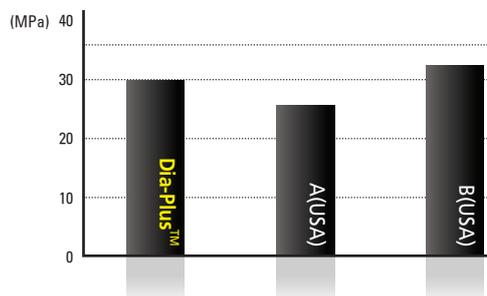
Light Cured Single Component Bonding Agent

## FEATURES & BENEFITS

### ● High Bonding Strength Performance

- Optimizes the enamel etching procedure in conjunction with all light-curing restorative materials
- Indirect restorations of Porcelain, Amalgam or Composite repair after light curing with a minimal film thickness
- Ethanol-based bonding agent enables to maintain its exceptional bond strength

Shear bond strength



### ● Microleakage

Item	Micro-leakage score	Standard Deviation
DiaPlus™	1.1	0.9
A	1.0	0.8
B	1.6	1.3
C	1.0	1.2

### ● Packages

► ITEM #2001-2101

- One-bottle bonding agent(1 bottle × 5ml)



## DISPOSABLE BRUSHES

- Flexible adhesive tip allows restorations and small objects of all kind to be picked up, held, carried and placed quickly and easily
- These brushes are included DiaPlus G7's Regular Package

SIZE	ITEM NO.
Small	2001-6301
Medium	2001-6302
Large	2001-6303

(Pkg. of 100)



# DIA-PLUS™ G7

Single Component Self-Etching Light-Cured Bonding Agent

## FEATURES & BENEFITS

Dia-Plus™ G7, the innovative 7th Generation bonding agent and offers superior and consistent bonding results on dentin and enamel with one bottle, one coat self-etching bonding agent system.

### ● Benefits

- Has Etch, Desensitize, Prime and Bond all with One-Bottle, One-Coat bonding system and no separate etching
- Fast 3 Steps (less than 35 seconds) reduces the risk of contamination
- Offer a tight and long-lasting bond between light-cured composite and both enamel and dentin by a highly advanced formulation
- Strong and tight bond to dentin and enamel is offered by 4-META monomer for adhesive to dentin and Phosphate Methacrylate for superior bonding strength to enamel
- Consistent and a long term bond strength with the unique Nano-Filler
- Provide a very low risk of post-operative sensitivity
- Remarkable thin bonding layer less than 10µm offers a frosty surface for much easier application of the first composite layer

### ● Packages

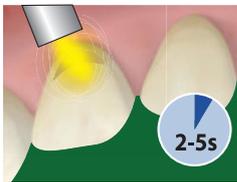
Regular Package	Refill Package
<ul style="list-style-type: none"> <li>• ITEM #2001-2701</li> <li>- One bottle bonding agent (1 bottle × 5ml)</li> <li>- 1 Mixing well</li> <li>- 50 disposable brushes</li> </ul>	<ul style="list-style-type: none"> <li>• ITEM #2001-2702</li> <li>- One bottle bonding agent (1 bottle × 5ml)</li> </ul>

### ● Technique Guide

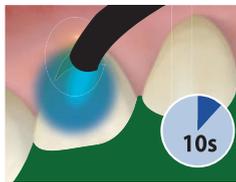
- One coat, simple and fast bonding application



Apply Bonding Agent with scrubbing for 20 seconds.

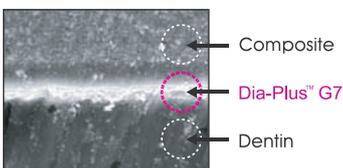


Dry with high pressure air for 2~5 seconds.



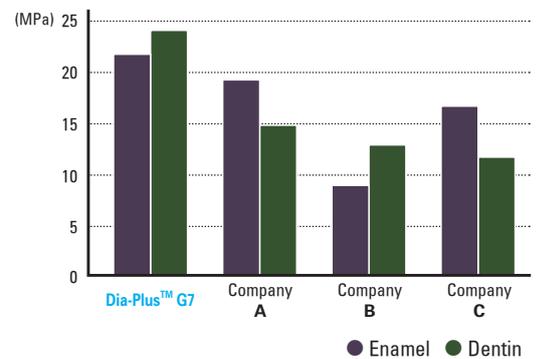
Light cure for 10 seconds.

### ● Thin Bonding Layer



*Less than  
35  
seconds*

### Superior Bond Strength



# DIAETCH™

37% Etching Gel Phosphoric Acid

## FEATURES & BENEFITS

### ● Quick and Effective Application

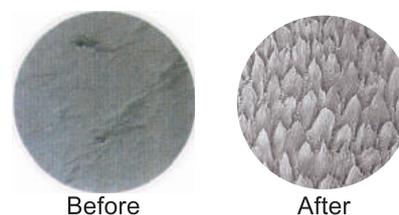
- Used for enamel etching and dentin conditioning in conjunction with sealants, composite restorations and the adhesive lusting of indirect all-ceramic or composite restorations
- Effective application to the desired place with consistent material thickness
- Balanced handling properties
- Enables to rinse completely and easily from the tooth surface
- High biocompatibility

### ● Packages

Economic Package Type A
<ul style="list-style-type: none"> <li>• ITEM #2001-3101</li> <li>- 5 Syringes × 5ml and 20 disposable tips</li> </ul>
Economic Package Type B
<ul style="list-style-type: none"> <li>• ITEM #2001-3102</li> <li>- 5 syringes × 3ml and 20 disposable tips</li> </ul>
Regular Package
<ul style="list-style-type: none"> <li>• ITEM #2001-3103</li> <li>- 2 syringes × 3ml and 10 disposable tips</li> </ul>
Refill Package Type A
<ul style="list-style-type: none"> <li>• ITEM #2001-3202</li> <li>- 1syringe × 5ml and 5 disposable tips</li> </ul>



### ● Superior Etching Effect



(Microphotographs of premolar, X1,000)

# DIASEAL™

Light Cure Pit & Fissure Sealant

## FEATURES & BENEFITS

### ● High Bonding Strength Performance

Designed for sealing enamel pits and fissures of teeth to prevent caries

### ● Benefits

- UDMA series monomer and Nano-filler offers high flowability, excellent wear resistance and strength
- Optimal viscosity to flow easily and helps for easy application
- Ensures hygienic and easy delivery and outstanding versatility
- High visual verification during application

### ● Packages

Regular Package	Refill Package
<ul style="list-style-type: none"> <li>• ITEM #2001-5101</li> <li>- Sealant 2 syringes × 1.2ml</li> <li>- Etching 2 syringes × 1.2ml</li> <li>- 10 disposable needle tips</li> </ul>	<ul style="list-style-type: none"> <li>• ITEM #2001-5201</li> <li>- Sealant 1 syringe × 1.2ml</li> <li>- 5 disposable needle tips</li> </ul>



### ● Properties

Mean value and standard deviation of micro-leakage score

Materials	Micro-leakage score	Standard deviation
DiaSeal™	1.0000	1.1094
U	1.7333	1.4829
M	0.9167	1.2795

Thermocycling 500 times, 1% Methylene blue solution

# DIAFIL CORE™ AUTOMIX

Dual Cured Core Build-up Composite

## FEATURES & BENEFITS

Dual-curing(Light and self-curing) core build-up and radiopaque two-component composite materials in Automix delivery system

### ● Benefits

- Comfortable dispenser: Automix syringes deliver a correct and consistent mix on every uses
- Easy and precise application with Automix and Intraoral tips
- Dual curing: Light cure for 40 seconds or Chemical cure within 4 minutes
- High compressive strength composite resin and long-term durability
- Cuts and wears like dentin
- Superior bond strength with DiaPlus
- Available 2 colors : Natural color(A3 shade) for the optimal esthetic results and Blue color

### ● Packages

- ITEM#2001-8101 Natural Color(A3 shade)
- ITEM#2001-8102 Blue Color
  - 2 syringes of 9g
  - 10 Intraoral tips
  - 10 Automix tips
- ITEM #2001-8109
  - 20 Automix tips and 20 Intraoral tips



# DIAFIL CORE™

Self-curing Core Build-up Composite

## FEATURES & BENEFITS

Self-curing and long-term fluoride releasing composite materials consist of two-components, base plus catalyst for core build-up system

### ● Benefits

- Provides good handling properties for easier use
- Offers more faster self cure set time
- Smooth and creamy materials help fill it into needle tips very easily
- High level of radiopacity

### ● Packages

- ITEM #2001-7101
  - 10g Base + 10g Catalyst
  - 15 Spatulas
  - 50 Mixing pads
  - 10 Needle tips



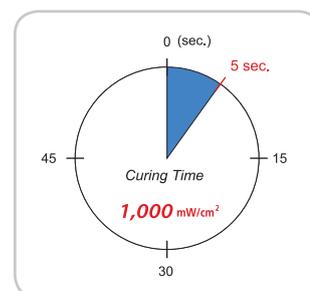
# DIA-TEMP™

Visible, Light Cured Temporary Filling Material



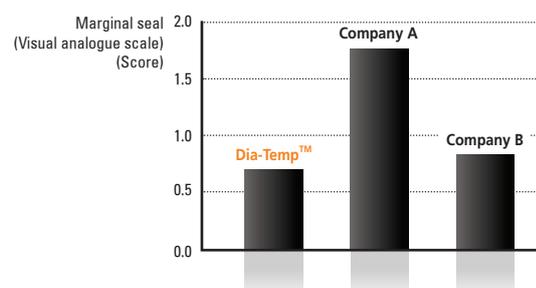
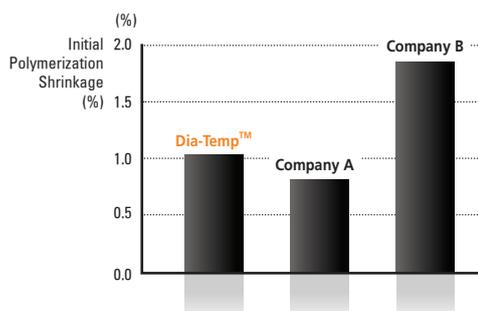
## FEATURES & BENEFITS

- Light Cured material with Nano-sized Silver for temporary restorations of inlay and onlay, for relining prefabricated crowns and bridges
- Easy Handling with high Elastic and Strength
- Excellent Marginal Sealing
- Quick & simple removal
  - Can be removed in one piece without any debris
- Low Polymerization Shrinkage
- Easy Application: Convenient syringe dispensed material does not require mixing
- Blue Dia-Temp is ideal for Posterior teeth
- Yellow Dia-Temp is ideal for Anterior teeth



### ● Packages

- ▶ 3 syringes of 3g
  - ITEM #2003-1101 Blue
  - ITEM #2003-1201 Yellow



# DiaCem™ TempNE

Non Eugenol Temporary Cement

## FEATURES & BENEFITS

- Non-Eugenol Temporary cement for trial cementing restorations or temporary crowns and bridges

### ● Features

- Easy and precise direct dosing
- No hand mixing and Stable mix of base and catalyst viscosity with the automix tip
- High bond strength to prevent leakage and sensitivity to cold and heat
- Easy removal for the patient comfort
- Low film thickness with high compressive and flexural strength
- Fast working time(3 min) and setting time(5 min in the mouth)

### ● Packages

- ITEM#2004-2101 2 Syringes of 10g, 10 Automix tips
- ITEM#2001-6112 20 Automix tips



# D-LUX

Cordless LED Curing Light



## FEATURES & BENEFITS

D-Lux is a new advanced cordless LED curing light. Made from the highest quality aluminum, D-Lux dissipates heat quickly to prevent overheating problem so that it can produce the maximum light intensity safely and consistently.

### ● Features

- OLED panel: unique and advanced one-button control
- A high intensity of **1,600 mW/cm<sup>2</sup>** offers extremely short curing times of no more than **5 seconds**
- Cordless, highly portable and lightweight (only 155g)
- Unique ergonomic design: provides comfortable grip and easy-to-read OLED panel
- Durable one-piece aluminum design is robust and easy to disinfect
- High-performance lithium-ion battery technology:
  - A new fully charged battery provides 160 × 10-second cures
  - OLED panel conveniently indicates battery life and a countdown timer for the next needed charge
  - Battery can be fully recharged in 90 minutes
- **5 versatile curing modes** for every indications
- Easy to change the battery pack

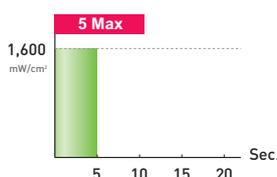
### ● Packages

- ITEM #4004-1001 Regular Kit
  - D-Lux Handpiece & Charger
  - Accessories : Light Guide(11 × 11mm), Plastic Protector, Power Supply and Cord

### ● Device Part Codes

- ITEM #4004-1110 Handpiece
- ITEM #4004-1120 Charger
- ITEM #4004-1130 Light Guide(11 × 11mm)
- ITEM #4004-1150 Battery Pack
- ITEM #4004-1160 Plastic Protector
- ITEM #4004-1170 Power Supply (Adapter)
- ITEM #4004-1171 Power Cord

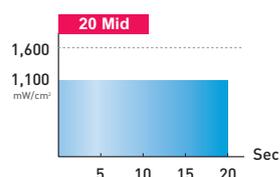
### ● 5 Curing Modes



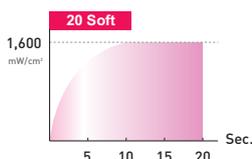
**5 Max:**  
Maximum light intensity output for 5 seconds



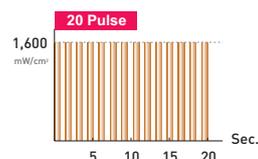
**10 Max:**  
Maximum light intensity output for 10 seconds



**20 Mid:**  
70% output of maximum light intensity for 20 seconds



**20 Soft:**  
An initial 10% output of maximum light intensity that gradually increases to full power in 10 seconds, followed by 10 seconds output at full power



**20 Pulse:**  
Pulses every 0.15 seconds for 20 seconds at maximum light intensity





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# DiaDent's Network

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