

# DIA-X BOND™

**Universal**

*X-traordinary Strength,  
Remarkably Simple.*

## INDICATIONS FOR USE:

- 🦷 All direct restorations:  
Resin-based composite, resin-modified glass ionomers,  
core build-up, resin cement, etc.
- 🦷 All indirect restorations:  
metal, zirconia, glass ceramics, alumina, etc.
- 🦷 Desensitization/Sealing of Tooth
- 🦷 Intraoral Repair  
(chipped porcelain, additions to direct restorations, etc.)



**Dia Dent**®

[www.diadent.com](http://www.diadent.com)

X-traordinary Strength, Remarkably Simple.

# DIA-X BOND™ Universal

## Advantages of Universal Bond vs 7th Generation Bond

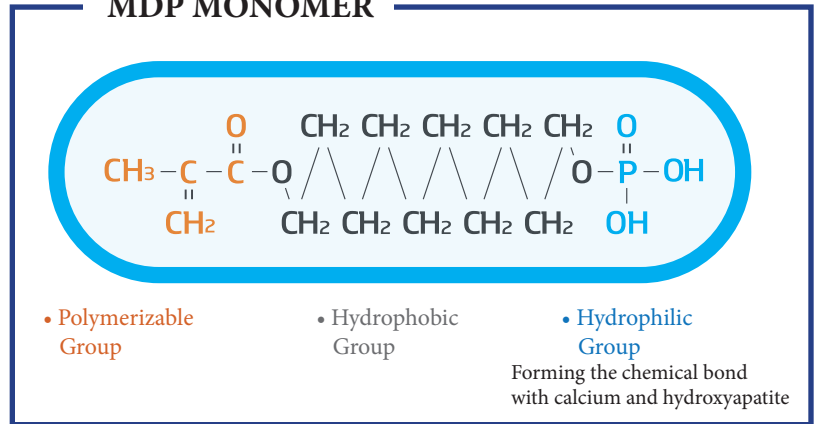


Universal Bond	7th Generation Bond
Versatile: total-, self-, or selective-etching	Self-etching
Stable and hydrophilic	Needs to be thoroughly shaken before use
Self-etching without additional etching material has better adhesion than 5th generation bonding (2-step process)	Weak bond to enamel
Indirect restorations, direct restorations (zirconia/metals, <b>10-MDP</b> as the primary adhesive functional monomer)	Direct restorations only (enamel/zirconia, ceramics, etc.)
Virtually no post-up sensitivity	Reduce risk of post-op sensitivity
Long shelf life (2 years)	Short shelf life

## 10-MDP Monomer Features

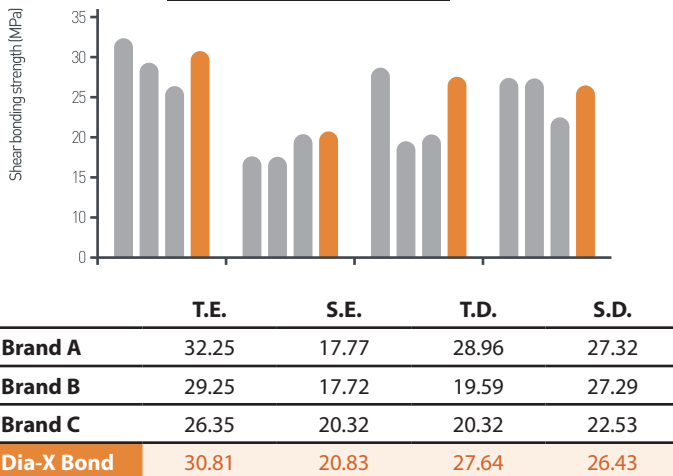
- The 10-MDP monomer component shows excellent bonding strength to metals such as zirconia and alumina
- Excellent overall bonding strength to teeth (dentin, enamel), indirect restorations (metal, zirconia, alumina), and direct restorations (composite resin)
- Excellent chemical bonding with tooth components due to the structure of the hydrophilic group of 10-MDP
- It has low solubility in water and forms excellent chemical bonding with the tooth surface
- 10-MDP monomer has excellent solubility stability compared to other monomers, as it is the most hydrophobic of the adhesive functional monomers

### MDP MONOMER

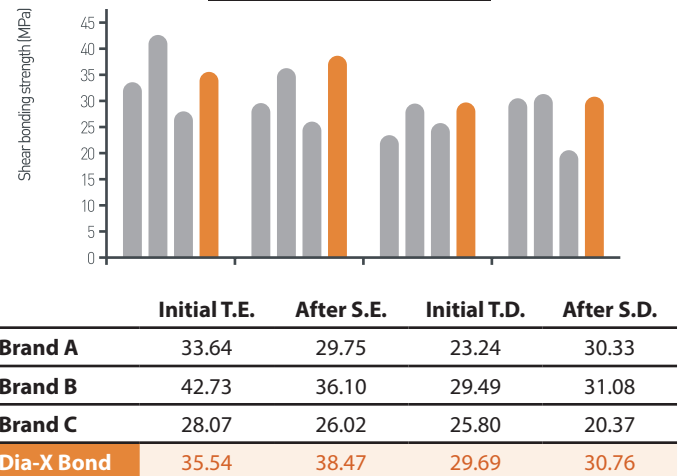


## Direct Restoration Immersion Tests

**24H Immersion Test**



**6mos Immersion Test**



Conditions: • Composite resin: DiaFil  
 • 37% Etching Gel: DiaEtch  
 • Light curing with D-Lux+ (high mode 10 secs)

Conditions: • Number of specimens: 15 ea  
 • Light curing with D-Lux+ (high mode 10 secs)  
 • 6 months / 37°C / 1mm/min shear adhesion measurement

Abbreviation: T.E. (Total Etching Enamel) / S.E. (Self Etching Enamel) / T.D. (Total Etching Dentin) / S.D. (Self Etching Dentin)

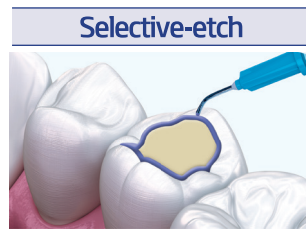
# DIA-X BOND™

## Universal

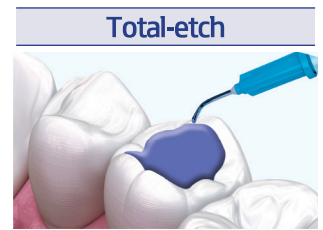
VERSATILITY:  
All Etching Techniques



No phosphoric acid



Phosphoric acid on enamel



Phosphoric acid on enamel and dentin

## Step-by-Step Instructions

### • Direct Restoration



Step 01  
Prepare & isolate tooth

Step 02  
Etch & wash off excess with water

Step 03  
Apply bond & rub for 20 seconds

Step 04  
Air dry for 5 seconds (do not desiccate)

Step 05  
Light cure for at least 10 seconds

Step 06  
Final restoration

### • Indirect Restoration

Select the etching technique:

Self-etch >> Start from Step 02 if etchant is not used



Step 01  
Selective-etch



Step 01  
Total-etch



Step 02  
Apply bond & rub for 20 seconds



Step 03  
Air dry for 5 seconds (do not desiccate)



Step 04  
Light cure for at least 10 seconds



Step 05  
Apply bond on inlays/onlays



Step 06  
Cementation



Step 07  
Final restoration

### • Desensitization/Sealing of Tooth



Step 01  
Prepare & isolate tooth

Step 02  
Etch & wash off excess with water \*omitted if using self-etching method

Step 03  
Apply bond & rub for 20 seconds

Step 04  
Air dry for 5 seconds (do not desiccate)

Step 05  
Light cure

Step 06  
Remove the oxygen-inhibited layer with a cotton pellet moistened with alcohol

### • Intra-Oral Repair



Step 01  
Prepare surface

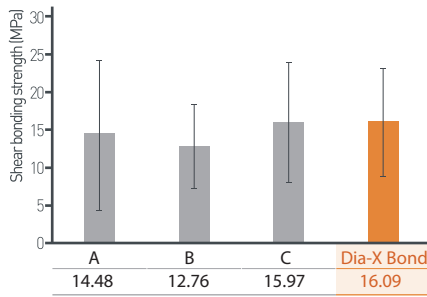
Step 02  
Apply bond

Step 03  
Air dry

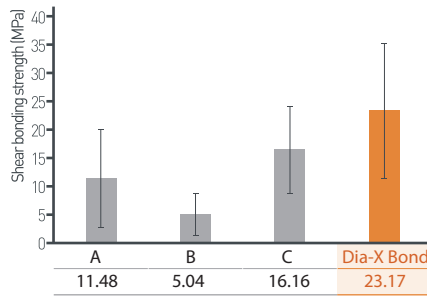
Step 04  
Restoration

Step 05  
Light cure

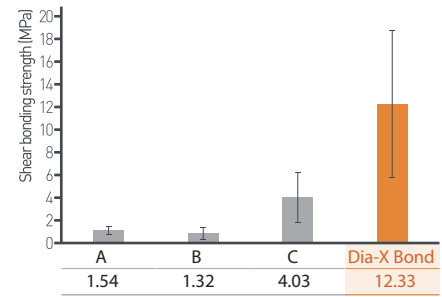
**Indirect Restoration Material Comparison Tests**



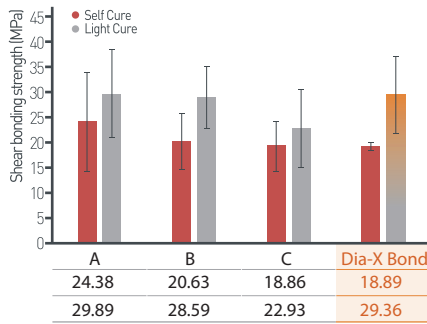
<Zirconia>



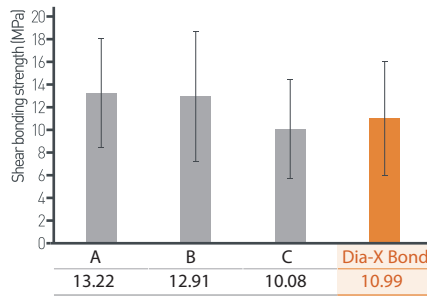
<Metal>



<Ceramic (Porcelain)>



<Light Cure Resin Cement>

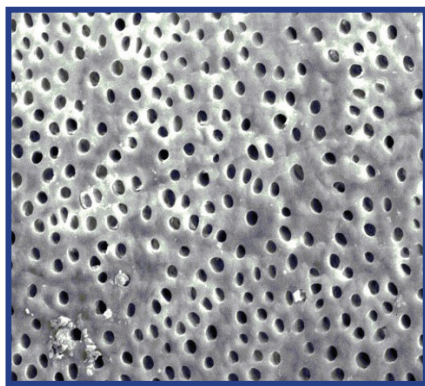


<RMGI>

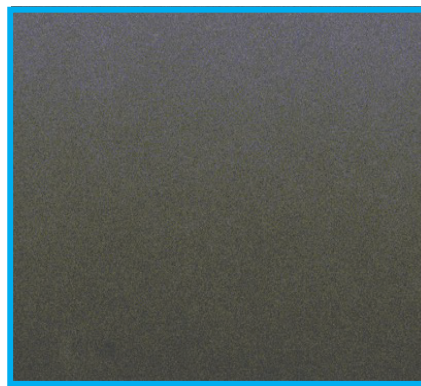
**Conditions:**

- Number of specimens: 5 ea
- Light curing with D-Lux+ (high mode 10 secs)
- Resin cement: Self-cure at 6.5 minutes at 37°C
- 24H / 37°C / 0.75 mm/min shear adhesive strength measurement

**Desensitization / Dentin Tubules Occlusion**



SEM HV - 20.00kV  
View Field - 144.5 µm  
SEM MAG - 2.00 kx  
WD - 20.07mm  
Det - SE  
Date(m/d/y) - 11/27/20



SEM HV - 20.00kV  
View Field - 144.5 µm  
SEM MAG - 2.00 kx  
WD - 22.40mm  
Det - SE  
Date(m/d/y) - 11/27/20

SEM shows **Dia-X Bond Universal's** desensitization effectiveness by completely occluding the dentin tubules.