

## PHYSICAL PROPERTIES

Basic Ingredients:  
 Self-Etch Primer: Mixture of Functional Sulfonic acid resin, HEMA, and other multi-functional methacrylate resins with water and initiator;  
 Nano-Bond Adhesive: PMGDM, HEMA, BisGMA, Surface functional nanosized particulate material, acetone and polymerization initiators.

Water Compatibility: hydrophilic  
 Light Curing time: 10 seconds

Bond Strength (MPa) to:  
 Self-Etch Primed Dentin: 24  
 Self-Etch Primed Enamel: 22

To following substrates in conjunction with *Cement-It* Universal C&B cement:  
 Rexillum III (Non-precious metal): 20  
 Rx C (Gold Alloy): 18  
 Sculpture Lab Processed Composite: 26

## ORDERING INFORMATION

<b>Nano-Bond Nano-Particulate Reinforced Adhesive System</b> .....	REF N55
1- 6 ml Nano-Bond Adhesive	
1- 6 ml Nano-Bond Self Etch Primer	
1- 3 ml Nano-Bond Dual Cure Activator	
1- 3 ml syringe 37% Etch gel	
Instructions, Accessories and MSDS	
<i>Nano-Bond Adhesive</i> .....	REF N55AA
1- 6 ml Nano-Bond Adhesive	
<i>Nano-Bond Self Etch Primer</i> .....	REF N55AB
1- 6 ml Nano-Bond Self Etch Primer	
<i>Nano-Bond Dual Cure Activator</i> .....	REF N55AC
1- 3 ml Nano-Bond Dual Cure Activator	
<i>37% Phosphoric Etching Gel</i> .....	REF N01H
2- 3 ml syringe 37% Etch gel	



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203-265-7397 • TOLL FREE FAX: 877-677-8844  
 Order Online at [www.pentron.com](http://www.pentron.com)

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# NANO-BOND™

**NANO PARTICULATE REINFORCED ADHESIVE SYSTEM**



**TECHNOLOGY SO INNOVATIVE,**

**IT WAS FEATURED IN THE N.Y. TIMES!**

# NANO-BOND™

## NANO-PARTICULATE REINFORCED ADHESIVE SYSTEM

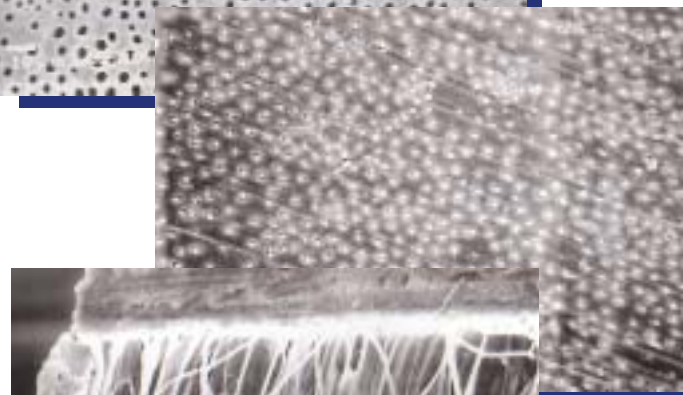
### WHAT IS THE NANO-BOND SYSTEM?

The *Nano-Bond* System consists of a uniquely formulated Self Etch Primer and a nano-particulate reinforced Adhesive that work together to produce tenacious bonding to the tooth with virtually no sensitivity.



### HOW NANO-BOND HELPS TO ALLEVIATE SENSITIVITY!

Conventional bonding agents utilize an acid etchant to remove the smear layer and open up the tubules for penetration by the resin adhesive. Unless all these tubules are completely sealed, sensitivity will result.



*Nano-Bond* does not remove the smear layer – it modifies it. *Nano-Bond's* HEMA-containing Self Etch Primer starts with a pH of 1 for effective etching of the tooth surface, but quickly neutralizes, leaving the tooth surface properly etched and occluded with an aqueous layer containing the HEMA.



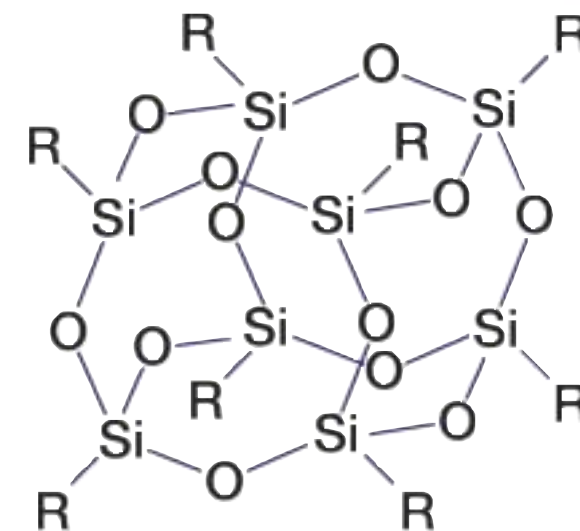
This optimally moist surface provides a superior environment for effective resin penetration of the tubules. The result is a tenacious bond to dentin and enamel.

### SHEAR BOND STRENGTH OF NANO-BOND ADHESIVE

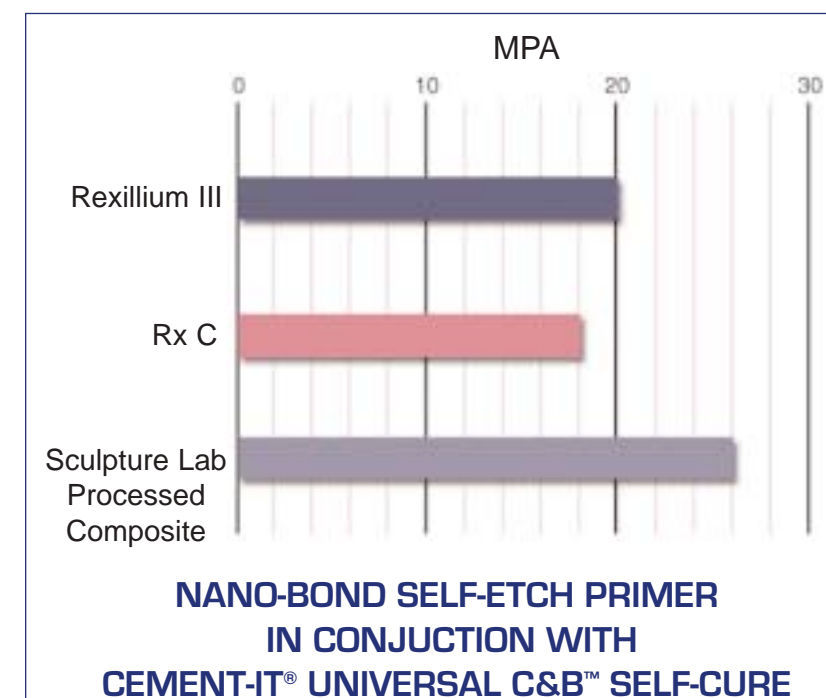


### THE BOND WITHIN THE BOND – FEATURED IN THE N.Y. TIMES TECHNOLOGY SECTION, 12/16/02!

The nano-particles contained in *Nano-Bond* are quite different than those commonly used in dentistry. Unlike conventional nano-particles, which are used as filler particles, the *Nano-Bond* structure does not just consist entirely of silicon dioxide. Instead, *Nano-Bond* contains polyhedral-shaped, nano-particles which contain surface functional groups to improve the properties of the resin. This new technology bridges the property space between hydrocarbon based plastics and ceramics. These structures are characterized by their 3-dimensional, “cage-like” molecular shapes, that serves to increase modulus and hardness while maintaining the stress and strain characteristics of the base resin.



### SELF CURE, DUAL CURE MATERIALS OR SEATING INLAYS – NO PROBLEM!



The *Nano-Bond* System is versatile and can be used in all your bonding procedures, whether direct or indirect. The *Nano-Bond* Kit contains a Dual Cure Activator that is easily mixed with the Adhesive to provide a solid bond to self and dual-cured materials. In addition, the Dual Cure Activator allows the *Nano-Bond* Adhesive to cure in the absence of light. This permits more precise seating of your inlays.