



# Nano-Bond<sup>®</sup>

## Nano Particulate Reinforced Adhesive System



If you've been experiencing post-operative sensitivity, you've probably thought about trying one of the self etch bonding systems currently available. But maybe you've been concerned about the limits of the application and their compatibility with self and dual-cure materials.

If that's the case, Pentron<sup>®</sup> Clinical would like to introduce you to the sensible alternative – the *Nano-Bond* Nano-Particulate Bonding System.

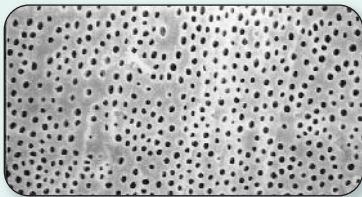
## Self-Etching Made Sensible!

### How The Nano-Bond<sup>®</sup> System Works

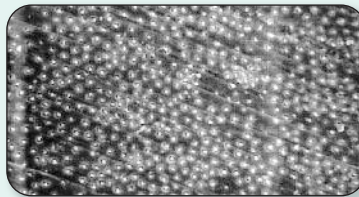
The *Nano-Bond* system consists of a uniquely formulated self-etch primer and adhesive that work together for great bonding to dentin and cut enamel. The HEMA-containing primer starts with a pH of 1 for effective etching, but quickly neutralizes, leaving the tooth surface properly etched, but with the tubules occluded to reduce sensitivity.

The *Nano-Bond* resin is reinforced with a unique, functional, nano-particle (see below for details) that strengthens the resin while it infiltrates the etched surface and provides a strong interface. The *Nano-Bond* kit also contains a dual cure activator that can be easily mixed with the resin and guarantees high bond strength to all self and dual-cure resin systems.

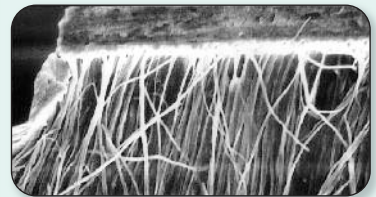
### How the Nano-Bond<sup>®</sup> System delivers a more reliable bond with reduced sensitivity



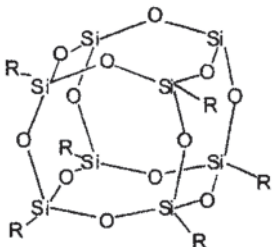
Acid etching of dentin will open up the tubules creating the potential for sensitivity....



Self etching leaves the tubules occluded, markedly reducing the possibility of sensitivity....



....While allowing the nano-particle, reinforced resin to penetrate deep into the tubules for a reliable bond.



### What Makes The Nano-Bond<sup>®</sup> System Unique?

The *Nano-Bond* system contains polyhedral-shaped, surface functional nano-particles. 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, which increases modulus and hardness while maintaining the stress and strain characteristics of the base resin.

# Nano-Bond®

## Nano Particulate Reinforced Adhesive System

### Physical Properties:

**Self-Etch Primer:** Mixture of Functional Sulfonic acid resin, HEMA, and other multi-functional methacrylate resins with water and initiator

**Nano-Bond Adhesive:** PMGDMA, 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

**Bond Strengths (MPa) to the 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:

**Nano-Bond Nano-Particulate Reinforced Adhesive System** 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 and Accessories

### Nano-Bond Refills

1 – 6 ml <i>Nano-Bond</i> Adhesive	REF N55AA
1 – 6 ml <i>Nano-Bond</i> Self-Etch Primer	REF N55AB
1 – 3 ml <i>Nano-Bond</i> Dual-Cure Activator	REF N55AC
2 – 3 ml syringe 37% Phosphoric Etching Gel	REF N01H

For more information on our entire line of innovative dental products visit us at [www.pentron.com](http://www.pentron.com) or call us at **1.800.551.0283**

800.551.0283 | 203.265.7397 | [www.pentron.com](http://www.pentron.com)

Bond-It® | Bond-1® | Bond-1® SF | Nano-Bond® Adhesives | Impression | Crown & Bridge | Restoratives

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