

Pentron Corporation Announces Commercialization of Nanoreinforced™ Dental Bonding System Utilizing Hybrid Plastics' POSS® Nanocomposites

Fountain Valley, CA: Pentron Clinical Technologies announced the introduction of a new class of dental bonding agents based on Hybrid Plastics' Polyhedral Oligomeric Silsesquioxane (POSS®) Nanotechnology. This represents the first commercialization of POSS® nanocomposites in dental applications. These hybrid nanochemicals had been hailed by R&D magazine as one of the 100 most technologically significant new products for the year 2000.

The adhesive will be marketed under the name NANO-BOND Universal Bonding System. Pentron reports that POSS® technology results in strengthened resin while it infiltrates the etched surface and provides a strong interface between the tooth and the restorative material. The system consists of a uniquely formulated self-etch primer and adhesive system that are said to work together for great bonding to dentin and cut enamel. The kit also contains a dual cure activator that promotes reliable bonding to self and dual-cured materials. The Nano-Bond System greatly alleviates the problem of post-bonding sensitivity by keeping tubules occluded during the self-etching step.



POSS® is a revolutionary new Nanotechnology based on silicon-derived building blocks that provide nanometer-scale control to dramatically improve the thermal and mechanical properties of traditional polymers while offering easy incorporation using existing manufacturing protocols. These compounds have an average diameter of just 1.5 nanometers, or billionth of a meter. POSS® nanomaterials can be used both as direct replacements for hydrocarbon based materials or as low-density performance additives to traditional plastics. They release no VOCs, and, thereby, produce no odor or air pollution. They are biocompatible, recyclable, non-flammable, and competitively priced with traditional polymer feedstocks. POSS® Nanostructured™ materials can be readily incorporated into virtually any existing polymer system through blending, grafting or copolymerization.

For More Information Contact:
Carl Hagstrom, Chief Operating Officer
chagstrom@hybridplastics.com

Hybrid Plastics, Inc.
18237 Mt. Baldy Circle
Fountain Valley, CA 92708
Tel: 714.962.0303
Fax: 714.962.4024
www.hybridplastics.com