Captek (capillary technology) is an advanced metallurgical system for producing high-gold metal substructures for porcelain fused to gold single and multiple unit crown and bridgework. The warmth of the underlying gold-colored, precious metal coping enhances the vitality of bake-on porcelains and yields pleasing esthetic results even with conservative tooth reduction.

Quite simply, Captek provides you with a restoration that offers all ceramic crown aesthetics with porcelain fused to metal strength and fit. For you, that means confidence in prescribing Captek and for your patients, that means beautiful, natural smiles.

**CAPTEK - CAPILLARY CASTING TECHNOLOGY**

Captek capillary casting technology is a new approach to ceramometal restorations. Using a refractory die technique, two layers of a metal-impregnated wax are placed on the die. The first layer, Captek P, contains a gold-platinum-palladium combination. The layer is press-fit to the die and trimmed at the margin. The die is then fired in a porcelain furnace producing a high-platinum, high-palladium coping that contains a microscopic capillary network.

The second layer, Captek G, is 97% gold and is press-fit to the die and trimmed over the Captek P coping. This is then fired in a porcelain oven. The molten Captek G is drawn into the capillary network of the Captek P to totally encapsulate the gold-platinum-palladium combination within the gold. The final Captek coping is a high-strength metal composite with a deep yellow-gold appearance.
**THE BENEFITS OF CAPTEK**

**Natural Esthetics:** The oxide-free gold color of the Captek coping produces an excellent background for porcelain application. The warm gold simulates the internal color that the pulp produces in the tooth, producing life-like shades without opacity. And because Captek requires only a thin layer of opaque, the unpleasant bright, high-value appearance of thicker opaque layers often seen at ceramometal crown margins is eliminated.

**Minimal Thickness:** Reduced-thickness Captek copings and thin opaque layers help to prevent overcontouring of the porcelain and enable normal emergence profile with conservative tooth reduction.

**Elimination of Dark or Discolored Margins:** Your patients will appreciate the outstanding color matches and the elimination of graying at the margins.

**Precision Fit:** Captek is formed directly on the die producing an excellent fit (about 14.5-17.5 microns) and a significantly smaller marginal opening than conventional porcelain fused to metal restorations.¹

**Maximum Strength:** Load bearing capacity of Captek crowns is approximately 75 kg. The value for bridges is approximately 210 kg, which is equivalent to conventional porcelain fused to metal restorations.² Additionally, Boston University research suggests that ceramic shear bond strength of Captek is at least equal to that of conventional ceramometal crowns and that they have a high resistance to impact fracture.³

**Biocompatible:** Clinicians have observed that tooth surfaces restored with Captek appear relatively plaque free and were associated with more healthy periodontal tissues. Captek metal surfaces appear to support approximately 1/10 the number of bacteria as natural teeth and may be a preferred surface in restoring abutments with periodontal disease affection.⁴

**PREPARATION/CEMENTATION**

No bonding or aggressive preparations, just the standard PFM prep and cementation. Any type of tooth preparation can be used. This would include knife-edge, chamfer, bevel and shoulder preparations for metal or porcelain margins.

**SHADE SELECTION**

Select shade with a VITA Lumin Shade Guide or VITA 3D-Master Shade Guide. DAL is a certified VITAPAN 3D-Master Shade System laboratory featuring the Omega 900 3D porcelain system.

**IMPRESSION**

Preferably a polyether or polysiloxane material. It is necessary to send impression with the case in order to pour a second solid model for contact verification.

**FINISHING/Polishing**

Captek veneered with high-fusing porcelain - use conventional finishing/polishing procedures. Captek veneered with low-fusing, low-abrasion porcelain - use a medium/coarse grit diamond with a small amount of water spray (high-speed handpiece) for adjustments. To polish, first use a pre-polisher (gray wheels and points) and finish with a porcelain polishing wheel or point (Dalbit, Brasseler USA) with optional diamond polishing paste.

**PRODUCT SCHEDULING**

Please allow 9 in-laboratory working days.