

ENIGMAS & CONUNDRUMS

Part 1 – Bonding

There has been a noticeable trend toward harder denture teeth, the harder the better. Because we believe that we are providing a better appliance. A better appliance? Meaning that the harder teeth will last a very, very long time and the patient will be satisfied for longer and therefore won't need to replace the dentures for a greater period (how good is that!). That's the theory anyway. In practice however, it is true that composite teeth can be harder than acrylic teeth. Composite teeth contain fillers to increase hardness and abrasion resistance, but no fillers, to improve bonding characteristics. Is it possible to follow this trend? Could we benefit by using harder teeth? Without the associated problems that hard teeth present.

Are we looking for a very hard tooth (composite) where bonding is compromised, or a hard enough tooth (acrylic) that bonds well?

Herein lies the conundrum.

Can we have both?

The difference being, top quality acrylic teeth, lasting 7-8 years as opposed to composite teeth lasting 9-10 years, that's if the composite teeth stay attached to the denture base. Resulting in red faces and lost profits.

Mechanical retention and diatoric holes are only necessary when using dissimilar materials; for example, acrylic teeth and a nylon denture base, porcelain teeth and acrylic denture base, composite teeth and acrylic denture base, but not **acrylic teeth**

and acrylic denture base (these two are chemically compatible).

What if we had a range of top quality acrylic teeth which are comparable in both hardness and abrasion resistance to a composite core teeth, with softer necks for increased adhesion, so as we don't have to resort to special (expensive) bonding agents and drilling holes? Problem solved. Enigma teeth are comparable to Vitapan® teeth, in hardness and abrasion resistance without having any bonding issues.

Is there a simple procedure or process which can be performed the same way every time, to give us the same predictable results every time without having to resort to time consuming and expensive procedures. There are many theories and just as many procedures. Here is but one.



Trim hard outer layer to expose soft inner core on all areas that will contact with the acrylic denture base.



Enigma teeth trimmed and set. Anteriors - 2/3 of the height against acrylic base, posteriors supported by the denture base.



Wax up to trimmed margins on anterior teeth then invest.



Boil out. Separate and let dry. Run typhoon #1 bur over the teeth to roughen and leave a clean bonding surface. Blow off grindings lightly with air-gun.



Mix Diamond D heat cure acrylic. Pack at doughy stage. Left hand side denture teeth lightly painted with monomer*.



Denture de-flasked. Enigma teeth shade A2 mould K-41, P5 posteriors. Diamond D h/c light reddish pink shade. Schottlander separating solution.



21, 22, 23 wrenched off with a pair of pliers. The teeth broke off at the palatal surface, at the roughened margins.



12, 13 had a similar violent experience (note bond). Teeth broke off at roughened margin on palatal.



25, 26, 27 - Teeth fractured with pliers, note tooth structure remaining attached to acrylic base.



Anterior cross section - note fit of denture base.



Posterior cross section - note fit of denture base.



16, 17 cross section - note bond.

* Although the teeth on the left hand side of the denture were lightly painted with monomer, and the right hand side were not, no discernible difference was noticed in bond quality.

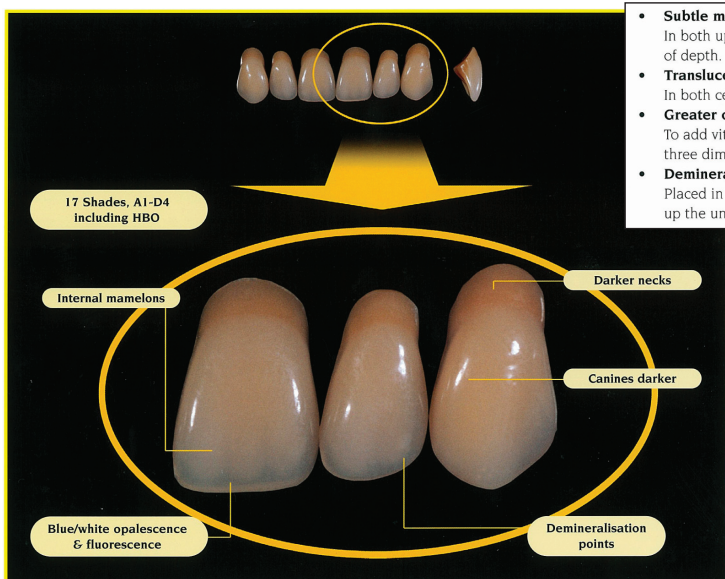
About the author

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- **Subtle mamelon effect.**
In both upper and lower centrals giving an appearance of depth.
- **Translucent incisal edges.**
In both centrals and laterals.
- **Greater opalescence of laterals.**
To add vitality and make the mouth appear more three dimensional.
- **Demineralisation points.**
Placed in some of the teeth out of every set to break up the uniformity.

- **Darker necks.**
As the root of a natural tooth is darker than its crown so the neck of an Enigma tooth contrasts with its body.
- **Longer necks.**
Many of the tooth moulds have necks which are longer and more naturally tapered than many denture teeth, allowing the simulation of gingival recession necessary to match adjacent natural teeth in partial denture wearers.

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Buy any 3 sets and get one free!
Anteriors, Posteriors or Pairs

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Posts \$23.00
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