



Triceram-Ceramic for Titanium Substructures

Bassam Haddad

When I first received the Triceram Kit and the Titanium crowns, I had my doubts about the final results because of what I had heard in the past, about possible discoloration, problems with oxidation, bonding problems and contamination of the furnace. So I decided to try it in a very conventional way just to see if it

was easy to use, without any complications and if it was profitable. I also wanted to make sure that the new generation of ceramics had been improved. This is the reason that gave me the push to try. I always searched for the best results not only for the porcelain but for the patient's health also (biocompatibility and healthy gums...).



125um and 2-3 bars pressure at a 45 degree angle (never stay on the same spot).

After having sandblasted, steam the framework and do not touch it with your fingers. A resting time of 10 minutes in air is necessary to allow the surface oxide layer to form. Do not wait longer than 30 minutes before applying the bonder. In this case I used the paste bonder; just a thin layer is enough. We are not trying to mask anything although the bonder has a nice white glossy finish (Fig. 1).

Opaque: Apply the opaque evenly but very thin to the bonder covered framework. For the second opaque bake, the opaque is also applied in a thin layer. The result should appear dense and shiny. The powder opaque applies very easily, almost like a paste opaque but without the long drying time. It is easy to control the consistency with the B.O.L liquid; also it is advisable to have some liquid on the side (Figs. 2, 3, 4 and 5).

Since there was not enough space, I only applied dentin over the opaque. The first bake was done only with Dentin, 70% of the final shape is achieved. The shrinkage is very minimal, so it's not necessary to over build (Figs. 6, 7, 8 and 9).

Before the second bake, I adjust and roughen the surface on the ceramic controlling the shade depth and chroma in addition to the light diffusion. Then added incisal transparent and incisal opalescence to the incisal area (1/3). Be aware not to over use incisal material. You can feel and see that the diffusion of the light is very natural (Figs. 10, 11 and 12).

The first step consists of controlling your firing temperature: Dentaurem recommends a firing test, as this is the only way to judge the correct bake sequence. For this purpose, follow the manufacturer's instructions with the NT material mixed with LV liquid. If the specimen is milky white, the temperature is too low, if the baked specimen is clear with sharp angles, then it is correct.

Surface conditioning of titanium: Use carbide burs only, work only in one direction, applying low pressure and a maximum of 12 000 RPM (due to titanium's low thermal conductivity, excessive pressure during grinding may result in overheating. Also it prevents the production of metal filing subsequently causing overlapping). After, carefully sandblast the framework with aluminum oxide



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5

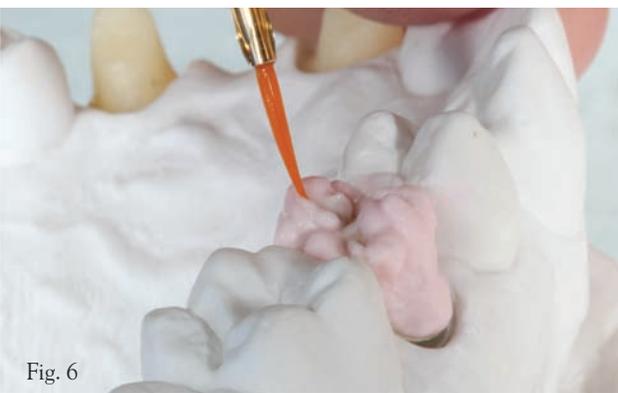


Fig. 6

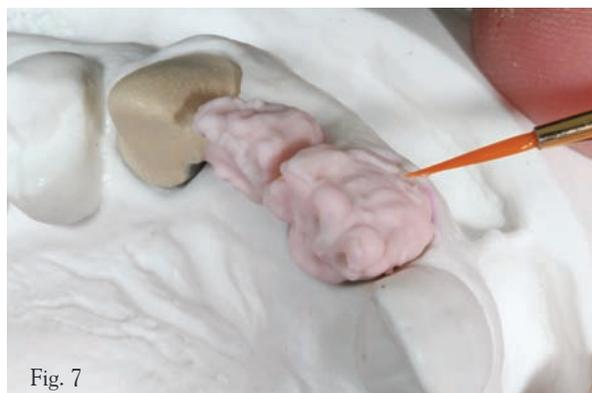


Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12

I stabilized the internal stains (stain universal) and baked it one final time at a lower temperature (720°C) before the final correction bake (Figs. 13, 14, 15 and 16).

I finish off with some dentin on the cervical area and the rest including the occlusal is covered by transparent effect, neutral and incisal transparent (Figs. 17 and 18).

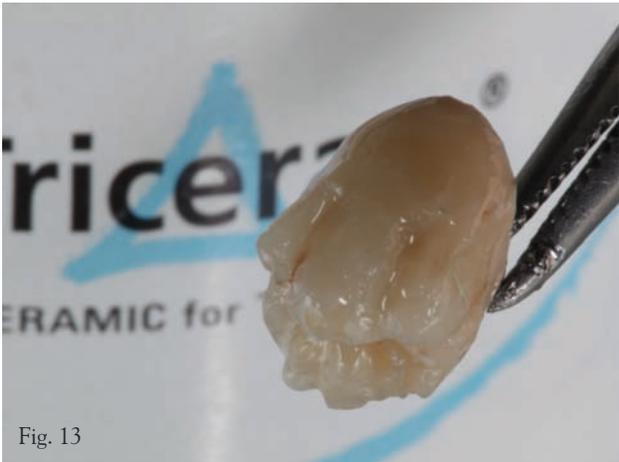


Fig. 13



Fig. 14



Fig. 15



Fig. 16





Fig. 24



Fig. 25



Fig. 26



Fig. 27

Small adjustments were made (contact points, occlusion, verifying the shade) and then I auto glazed (Fig. 19).

Over all Triceram is very easy to use. You can achieve the desired shade very easily and each effect is easily recognisable. Titanium should be treated differently from other alloys and there are some differences for the framework preparation, very few steps must be followed. Triceram is in a mid-range between low and high fusing ceramics. The other advantage of this product is that the firing cycles are very short and don't need any cooling

time . It's a Translucide ceramic that gives lots of depth and life to your work.

In conclusion, I found that the manipulation between Titanium and Triceram ceramic is very easy to handle (similar to other powders but more professional, more vital, giving very natural shades and aesthetics) (Figs. 20, 21, 22, 23, 24, 25, 26 and 27).

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About the author



Bassam Haddad graduated from Antonine University in Lebanon in 1989. He acquired a global and unique experience in the various systems of the dental technology by following courses with the biggest masters of the domain in Switzerland, Germany, France, Canada and the United States. He is member of the AACD as well as the CAED. He is known for his skills to mix colors and to manipulate forms to create teeth as natural and alive as aesthetically perfect. He is known for mastering very complex dentistry cases. He is the owner of Vivaclair Canada dental laboratory situated in Montreal.