

Brite Gold™

A new class of High Gold content alloy is now available for the dental professional to offer to their clients.

Brite Gold contains more than 90% Gold and has a very rich, pleasing and esthetic gold color.

When melting High Gold content alloys it is important that the proper casting procedure be followed to avoid overheating the alloy.

Overheating will adversely affect the composition, physical properties and volatilize trace elements needed for proper oxide formation. This will cause such problems as bubbling, fracturing and loss of bond to the oxide after the ceramic veneering material has been fired.

The following is an illustrated guide showing how to properly melt Brite Gold using propane and oxygen:

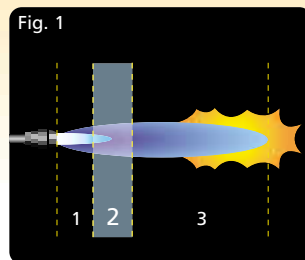
STEP 1

Prior to igniting the propane and oxygen, the regulators must be set at the proper pressures.

For melting Brite Gold we recommend a pressure of 2 psi (0.15 bar) for propane and 5 psi (0.35 bar) for oxygen.

STEP 2

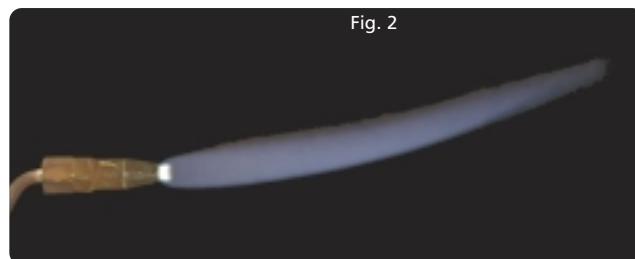
Begin melting the Brite Gold using the reducing zone which is between the inner and outer cones where the most complete combustion is occurring (Zone #2 in Fig. 1)



STEP 3

Start the flow of propane by opening the red valve on the torch and carefully ignite the gas.

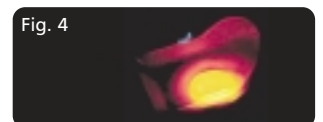
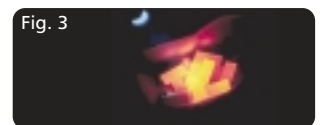
Slowly open the green oxygen valve and adjust the flow until a «soft» flame is achieved. (Fig. 2)



STEP 4

As Brite Gold heats up, (Fig. 3), the ingots will begin to flow together and form a liquid pool of molten alloy (Fig. 4). When the alloy reaches this state the casting ring is placed in the cradle and the casting machine is released.

Please note: We do not recommend the use of flux when casting Brite Gold. Once the casting machine stops, remove the ring and allow it to cool to room temperature before devesting.



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Brite Gold contains more than 90% Gold and has a very rich, pleasing and esthetic gold color.

However, high gold alloys are softer and require special handling and finishing procedures. If the finishing sequence is not done properly, this will result in a rough and / or contaminated surface.

Difficulties, such as bubbling and cracking, will occur in the ceramic material that is applied and fired to this improperly prepared surface.

The following is an illustrated guide to finishing Brite Gold:

STEP 1

The restoration is waxed, invested, cast and devested in the usual manner.

Please note:

Sand blast the surface carefully with Al₂O₃ (50 micron) at low pressure (2–3 bar). Don't use a hammer for divesting.

The resulting substructure is ready to be desprued. (Fig. 1)



Fig. 1

STEP 2

The substructure is separated from the sprue using a separating disc. (Fig. 2)

The unit must then be ultra-sonically cleaned for 5 minutes (distilled water) to remove any blasting residue that would be burnished into the surface during finishing.

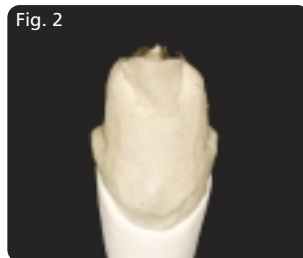


Fig. 2

STEP 3

A superfine crosscut carbide bur (Fig. 3) is used to reduce the sprue area and prepare the surfaces of the coping to receive ceramic.

To achieve the proper surface finish (Fig. 4) it is extremely important that the superfine crosscut carbide bur be used at slow speed (maximum rotation 10,000 rpm) and low pressure. Grinding has to be done in one direction.



Fig. 3

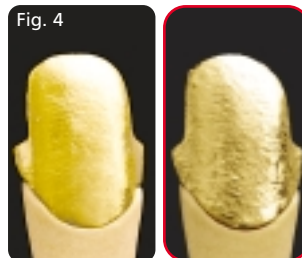


Fig. 4

Improper Finish
Grinding at 20,000 rpm

STEP 4

Once the surface has been properly finished it is air abraded with 50 micron white aluminum oxide at 2 bar of air pressure.

The unit is ultra-sonically cleaned for 5 minutes in distilled water and then dried. The air abraded surface must have a matte appearance and be free of bur marks or striations. (Fig. 5)



Fig. 5

Brite Gold crown after oxidation