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AURITEX-40 CERAMIC GOLD ALLOY TECHNIQUE OUTLINE

AURITEX-40 is an economical white ceramic gold alloy containing, 40% Gold; 0.1% Platinum; 40% Palladium; 10% Silver. It is compatible with all leading porcelains.

Wax-up: Minimum section thickness should be no less than 0.4mm. Use 8 gauge sprues. Sprue length should not exceed ¼ inch.

Investing and Burnout: Use Aurivest investment or equivalent. Carefully follow manufacturer's recommended liquid to powder ratio. To prevent air entrapment in mold during casting, the pattern should be covered by no more than ¼ inch of investment. Burnout at 1500°F for a minimum of 45 minutes or according to manufacturer's recommended time.

Casting: If a spring loaded centrifugal casting machine is used (Kerr, Torit or Emesco), lock casting machine arm in position after winding three full turns. A sufficient amount of metal should be used to leave a button of 6 dwt. At least one third of new metal should be added for each casting using previously used buttons. Use a quartz crucible that has not been previously used for a different alloy. Avoid graphite crucibles or the use of carbon, asbestos or flux in contact with the metal during melting. If an automatic induction-casting machine is used, do not use a graphite insert in the crucible.

For best results, melt using a gas-oxygen flame with the inner cone of the flame at least ½ inch long. To avoid excessive preferential oxidation of some of the alloying constituents, maintain a tip of inner cone at a minimum distance of ½ inch from metal. Cast at a temperature where the metal appears completely molten. Do not overheat. Quench after allowing the ring to bench cool for 5 minutes.

Preparation for Porcelain: Remove adhering investment and ultrasonically clean. Rough grind with a hard mounted stone all metal surfaces to which porcelain is to be applied. Do not use heatless stones. Clean again in distilled water in an ultrasonic cleaner.

Degas at 1900° F for 2 minutes in air and 2 minutes in vacuum (either the air exposure or the vacuum exposure may be done first). Sandblast again very lightly with the aluminum oxide abrasive to remove some, but not all of the oxide. During this and all subsequent steps, take particular caution to avoid contact between metal surface and any foreign object that could leave a contaminant deposit on the surface. After sandblasting, clean again in distilled water in an ultrasonic cleaner.

Surfaces are now ready for the application of opaque according to porcelain manufacturer's instructions.

Alternatively to the degassing procedure, the bond between the metal and porcelain can be enhanced by use of Aurident's Vanguard Bonder. If Vanguard Bonder is used, the golden color of the Vanguard Bonder will enhance the chroma and hues of the porcelain. Follow instructions with the bonder to apply.

Recommended Solders: WCS, PSF