

AURITEX-WP CERAMIC GOLD ALLOY TECHNIQUE SHEET

Auritex-WP is a low silver content white ceramic gold alloy compatible with most leading porcelain.

Wax-up: Minimum section thickness should be no less than 0.3mm. Use 8 gauge sprues. Sprue length should not exceed 1/4 inch.

Investment 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 1/4 inch of investment. Burnout for one hour at 1500° F.

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. Use a standard alumina or mullite type 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 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 1/2 inch long. To avoid excessive preferential oxidation of some of the alloying constituents, maintain tip of inner cone at a minimum distance of 1/2 inch from metal. Cast at approximately 2550° F to 2600° F, or at a temperature where the metal appears to flow freely. Quench after 2 to 3 minutes or after the exposed portion of the metal button is no longer red hot.

Preparation for Porcelain: Remove adhering investment either mechanically or with a commercial compound such as "Strip-it" or "No-San". If a sandblast is used, maintain air pressure 30 psi or less in order to avoid damaging the margins. Clean in distilled water in an ultrasonic cleaner. Rough grind with a hard mounted stone all metal surfaces to which porcelain is to be applied. Clean in distilled water in an ultrasonic cleaner.

Degas: at 1925° F for a total of 5 minutes. The first 3 minutes of degassing should be air and the final 2 minutes in vacuum. Sandblast again lightly with fine aluminum oxide abrasive to remove the dark oxide that forms upon degassing. 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 the dark oxide layer appears to have been removed, clean again in distilled water in an ultrasonic cleaner.

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

Recommended Solders: WCS, PSF