Aur*i*vest

INVESTMENT

INSTRUCTIONS

Aur*i* Vest is a fine-grain, phosphate, carbon-free investment made with high purity material designed for use with a complete range of dental alloys, including base alloys, high noble crown and bridge alloys, high noble ceramic alloys, palladium based ceramic alloys, and pressable ceramics. **Aur*i* Vest** is suitable for the quick burn-out, ringless technique and is stable to 1800°F/982°C. It may be used with conventional burn-out and paper-lined metal rings.

SUGGESTED MIXING RATIO

Powder	Total Liquid (ml.)	PRESSABLE CERAMICS (CROWNS & COPINGS) BASE ALLOYS		PRESSABLE CERAMICS (INLAYS & ONLAYS) PALLADIUM ALLOYS		HIGH GOLD CERAMIC ALLOYS, CROWN & BRIDGE ALLOYS	
		Special Liquid	Distilled Water	Special Liquid	Distilled Water	Special Liquid	Distilled Water
60 grams	15.00	6.75	8.25	5.00	10.00	2.75	12.25
100 grams	25.00	11.25	13.75	8.25	16.75	4.50	20.50
200 grams	50.00	22.50	27.50	16.50	33.50	9.00	41.00
300 grams	75.00	33.25	41.75	25.00	50.00	13.50	61.50

MIXING/INVESTING

Liquid and powder should be at room temperature, 72°F. The special liquid to water ratio may be modified to adjust the amount of expansion, but the total amount of special liquid and water must be maintained at the total liquid listed in the above table ***(tighter fits: more water, less special liquid, looser fits: more special liquid, less water)***. Debubblizer is not necessary but if debubblizer is used, be certain that patterns are dried thoroughly to avoid rough castings. For consistent results, always use clean dry bowls and mixing blades. Pour accurately measured special liquid and water into bowl and add the powder. With hand spatula, incorporate powder into the liquid for 15 seconds until no dry powder is visible. Mix mechanically under vacuum for 60 seconds at 250-550 rpm. Do not vibrate while pouring. The mold must be filled 1/4 inch above the wax patterns. Scrape the glaze at the top surface of mold to allow gases to escape.

QUICK BURN-OUT

Allow a minimum set time of 15 to 25 minutes before placing in heated burn-out furnace *(note: we suggest removing molds from plastic rings upon initial set and then bench set for an additional 15 to 25 minutes)*. Place mold in burn-out furnace at alloy manufacturer's suggested burn-out temperature. For small single molds *(100 grams or less),* hold at temperature for 20 minutes. Hold larger molds at temperature for 40 minutes. Add 15 minutes for each additional mold.

If different alloys are to cast at one time, set furnace temperature to that of the alloy requiring the highest burn-out temperature. Place all molds in the furnace. Cast the highest temperature alloy first. Then lower furnace temperature to the next lower alloy temperature, and heat soak for 15 minutes. Continue in the same manner until finished.

STANDARD BURN-OUT

Place molds in furnace at room temperature and heat to suggested temperatures in Table 2 at a rate of 11ºF (6ºC) per minute. Heat soak at burn-out temperature for 45 minutes. Add 15 minutes for each additional mold.

SUGGESTED ALLOY BURN-OUT TEMPERATURES

Base Metal Alloys	High Gold Ceramic Alloy & Palladium Alloy	Crown & Bridge Gold Alloys
1700ºF/927ºC	1500ºF/816ºC	1150ºF/620ºC

FOR PRESSABLE CERAMICS FOLLOW MANUFACTURERS INSTRUCTIONS FOR BURN-OUT TEMPERATURE

CASTING

In casting machines, high gold crown and bridge alloys that have higher densities require less windings *(e.g. 2 turns)* than lower density gold-palladium, palladium, or base metal ceramic alloys *(e.g. 3 to 4 turns)*. Increase the number of windings accordingly.

DEVESTING

METALS: Allow mold to bench cool. Do not wet investment. Break as much bulk as possible. Use old carbide burs to remove investment from inside copings, then sandblast.

PRESSABLE CERAMICS: After the mold has bench cooled to room temperature, take an unused plunger and place it parallel to the plunger in the pressed unit to determine the length that plunger has moved. This allows marking around the investment so that excess may be cut off with a diamond disc or some other type of cutting tool. Devest with 50 micron glassbeads with the pressure end blowing the beads at the sprue base to the top of the units at 2 to 3 bars. Best results are obtained by maintaining the blast tip at a 45 degree angle to the pressed surface.

PRECAUTIONS

Liquid is FREEZE STABILIZED.
Should liquid freeze, allow to thaw at ambient temperature and shake well before using.

WARNING: Avoid breathing investment dust, **Aur*i*Vest** contains silica.

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Dental Alloys you can depend on.

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AURIVEST TROUBLESHOOTING GUIDE

PROBLEM	CAUSES	SOLUTION
Investment Cracks or Explodes During Heating	***Improper Mixing***	Phosphate based investments require a clean mixing bowls and complete homogeneity. Mixers should be thoroughly cleaned and follow the mixing instructions. Hand mix the liquid and powders ***at room temperature*** until the powder is fully blended with the liquids followed by machine mix for 60 seconds under vacuum.
	Insufficient Setup Time	Different rings types and sizes affect the setup and evolution of vapors. Rings that do not allow the easy escape of moisture, such as plastic rings, may require longer time for the investment to fully setup. Larger diameter rings also affect the setup time. The instructions recommend 15 to 20 minutes bench set before placing in the burnout oven; however if larger sized rings or plastics are used, an additional 5 to 10 minutes should be given to allow full setup of the investment.
	Investment Poured After Initial Set	Do not use investment if it is too thick, warm, and hard to pour because it will not set evenly. Aurivest has approximately a 4 minute working time after mixing.
Too Loose or Too Tight a Fit	***Special Liquid to Water Ratio Must be Modified***	Changing the ratios of special liquid to water will change the fit of the coping. Regardless of the changes in liquid, the total liquid volume must remain constant as described in the instructions. • ***Looser Fits:*** Less Water and more Special Liquid • ***Tighter Fits:*** Less Special Liquid and more water
	Improper Mixing Time	Aurivest must be completely mixed under vacuum for 60 seconds. Too short a mixing time can result in tight fits.
Porosity in Coping	***Improper Mixing or Pouring of Investment***	Mixers should be thoroughly cleaned and follow the mixing instructions. Because Aurivest is so fluid, do not put on a vibrating table before mixing – this will introduce air and bubbles into the investment. It is sufficient to slightly vibrate the mixing bowl during pouring but do not introduce air into the mixture.
Cracking of Ring with Pressables	***Improper Heating and Pressing Conditions***	When processing pressable ceramics, follow instructions regarding the heating and processing of the pellets. This includes: • Burn out of the mold and plunger in a calibrated oven using the recommended temperatures. • Quickly transfer the heated ring and plunger to the pressing furnace. Place the room temperature pellet(s) in the ring and place warm plunger on top. ***Also note,*** if using a reusable plunger, do not grind surfaces which might cause improper pressure during the pressing cycles.