JRVT-PF

HIGH NOBLE YELLOW TYPE 2 or 3 CROWN & BRIDGE ALLOY

JRVT-PF is a high noble 77% gold alloy that has the unique properties needed for inlay, onlay and short span bridges. It can be heat treated to obtain the strength needed for crowns and bridges requiring moderate to high stress. JRVT-PF with its 25 micron grain size and 50% elongation, gives you the ability to burnish without fear of marginal flaking. It has the ductility needed for intricate inlays and is strong enough for full cast crowns and bridges. JRVT-PF will polish to a brilliant luster.

PROPERTIES		
Melting Range	1680º to 1725ºF (915º to 940ºC)	
Density	15.4 g/cm^3	
Grain Size	25 microns	
	AS CAST	**HARDENED**
Hardness	120 HV	160 HV
Tensile Elongation	50%	40%
Yield Strength	31,000 psi (255 MPa)	41,500 psi (300 MPa)
Ultimate Tensile Strength	57,000 psi (395 MPa)	64,000 psi (440 MPa)

CHEMISTRY	
Gold	77%
Platinum	1%
Silver	13%
Copper	8.5%
Contains less than 1% Indium, Iridium, Zinc	
Au & Pt group - 78%	
Classification-High Noble	

PROCESSING TECHNIQUE

SPRUING The indirect method is recommended for bridges. Direct spruing is recommended for inlays, onlays and crowns. Sprue to the bulkiest section. Patterns should be 1/4 inch from the top of the ring.

INVESTMENT Gypsum bonded investment is recommended. For bridges and full crowns use the thermal technique with a burnout temperature of 1200ºF (650ºC). The hygroscopic technique and a burnout temperature of 900ºF (480ºC) is recommended for inlays and onlays.

MELTING AND CASTING JRVT-PF can be melted with gas and compressed air. When melting with gas and oxygen, set gas pressure at 5 psi and oxygen pressure at 10 psi. Cast the alloy when it is fully puddled, balled and free from oxide on the surface. Carbon based casting fluxes may be used but should not be necessary when melting with a reducing flame. Quench JRVT-PF from dull red heat to obtain the as cast properties. The casting temperature is 1800ºF (1000ºC).

DEVESTING AND FINISHING Devested castings may be pickled. If aluminum oxide blasting is used, protect marginal areas. Use a fine stone to establish a uniform surface finish.

HEAT TREATMENT Anneal at 1350ºF (730ºC) for 10 mintues then water quench. Age harden the annealed alloy at 450ºF (230ºC) for 30 minutes.

POLISHING Use low speeds and light pressure

1. Rubber wheel with white flexi wheel
2. Polish with tripoli compound using a soft or medium felt wheel and/or a soft bristle brush
3. Polish using a rag wheel and/or soft bristle brush polish with rouge
4. Ultrasonically clean in water or ethyl alcohol for five minutes then shine with tin oxide and soft bristle brush either dry or with ethyl alcohol.

SOLDER AND FLUX Solder: 650 Fine Solder
Flux: Brown Fluoride Flux

5045Y r1

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