

JIV

HIGH NOBLE YELLOW TYPE 4 CROWN & BRIDGE ALLOY

JIV is a high noble Type 4 crown and bridge alloy that can be used for a variety of restorations. JIV has a wide hardness range, which means when bench cooled, it is perfect for restorations that must endure a high level of stress such as implants, long-span bridges and partial dentures. When JIV is water-cooled, it is ideal for single units. JIV melts, casts, finishes and polishes with ease and accuracy. The palladium-free version of JIV is JIV-PF.

PROPERTIES	
Melting Range	1680° to 1805°F (915° to 985°C)
Density	14.5 g/cm ³
Grain Size	30 microns
Modulus of Elasticity	15.95 x 10 ⁶ psi (110 GPa)
	HARDENED SOFTENED
Hardness	250HV 185HV
Tensile Elongation	20% 30%
Tensile Yield Strength	88,500 psi (610 MPa) 58,000 psi (400 MPa)
Ultimate Tensile Strength	109,500 psi (755 MPa) 78,900 psi (544 MPa)

CHEMISTRY	
Gold	68%
Copper	12.5%
Silver	11%
Palladium	6%
Platinum	1%
Contains less than 1% Zinc, Iridium, Indium	
Au & Pt group - 75%	
Classification - High Noble	

PROCESSING TECHNIQUE

SPRUIING

The indirect method is recommended for multi-units. Use an 8 gauge runner bar with 10 gauge connectors. If preferred, the direct method may be used on both single units and small bridges. Use a 10 gauge sprue 1/4" (6mm) to 3/8" (9mm) long. Sprues longer than 3/8" (9mm) should have a reservoir 1/16" (1.5mm) from pattern. Patterns should be a maximum of 1/4" (6mm) from top of investment. Use of a refractory model is recommended for partial dentures.

INVESTMENT AND BURNOUT

Either gypsum or phosphate bonded investment may used following the manufacturer's instructions. The burnout temperature should be at least 900°F (480°C) and should not exceed 1200°F (650°C).

MELTING AND CASTING

Extra winds of the casting arm are not required. A gas/compressed air or gas/oxygen flame with 5 psi gas and 10 psi oxygen is recommended. The alloy will fully puddle and form a ball before it is ready to cast. DO NOT OVERHEAT. The casting temperature is 1900°F (1040°C). Bench cool to obtain the hardened condition. Water quench from a dull red heat to obtain the softened condition.

DEVESTING AND FINISHING

Blast with aluminum oxide to remove investment particles and oxidation. Finish and polish using standard techniques.

SOLDER AND FLUX

Solder: 615 Fine Solder
Flux: Brown Fluoride Flux

5004Y r3

