

JWG

NOBLE WHITE TYPE 3 CROWN & BRIDGE ALLOY

JWG is a noble type 3 crown and bridge casting alloy. It is one of a series of three white precious silver palladium casting alloys offered by Jensen Industries. JWG features high strength, light weight, low cost, and melts, casts, finishes and polishes like a casting gold. The high melting range of JWG allows processing with the same investment, burnout and casting techniques as ceramic alloys.

PROPERTIES	
Melting Range	1960° to 2075°F (1070° to 1135°C)
Density	10.6 g/cm ³
Hardness	160 HV
Tensile Elongation	16%
Tensile Yield Strength	42,400 psi (295 MPa)
Ultimate Tensile Strength	64,000 psi (440 MPa)

CHEMISTRY	
Silver	69.5%
Palladium	25%
Indium	2.5%
Gold	2%
Zinc	1%
Au & Pt group - 27%	
Classification - 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.

INVESTMENT

A phosphate-bonded high heat investment without carbon is recommended.

BURNOUT

1300°F (705°C)

MELTING AND CASTING

Wind casting arm one turn more than normal. Use a multi-orifice torch with 10 psi gas and 20 psi oxygen. As JWG melts, a cloudy surface will appear. Continue heating until the cloudy surface clears. Release casting arm. The casting temperature is 2175°F (1190°C). DO NOT OVERHEAT.

DEVESTING AND FINISHING

Bench cool - quench when bottom of button turns dark. Remove castings from investment. Blast with aluminum oxide to remove investment particles and oxidation. Finish and polish using standard techniques.

SOLDER AND FLUX

Solder: 1400 Solder
Flux: Brown Fluoride Flux

5122Y r1

