

## JWG

### WHITE CROWN AND BRIDGE ALLOY

**JWG** is a noble type III 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°F to 2075°F
Density .....	10.6 g/cm <sup>3</sup>
Hardness .....	160 HV
Tensile Elongation .....	16%
Tensile Yield Strength (PSI) .....	42,400
Ultimate Tensile Strength (PSI) .....	64,000

#### CHEMISTRY

Silver .....	69.5%
Palladium .....	25%
Indium .....	2.5%
Gold .....	2%
Zinc .....	1%

Classification - Noble

#### PROCESSING TECHNIQUE

##### SPRUNG

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 AND BURNOUT

A phosphate-bonded high heat investment without carbon is recommended. Place in a cold furnace and raise temperature to 1300°F (705°C). Hold at 1300°F for one hour. Increase hold time for larger or multiple rings.

##### 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

JWG.5122Y

