

JCBD

YELLOW CROWN AND BRIDGE ALLOY

JCBD is a high noble type IV crown and bridge casting gold. It is one of a family of seven high gold content casting alloys offered by Jensen Industries. JCBD features 63.5% nobility, high yellow gold color, very high strength, reasonable cost, and melts, casts, finishes and polishes with speed, ease and accuracy.

PROPERTIES

Melting Range 1600° to 1660°F
Density 13.5 g/cm³

	<u>HARDENED</u>	<u>SOFTENED</u>
Hardness.....	260HV	180HV
Tensile Elongation	14%	35%
Tensile Yield Strength (PSI)	99,500	50,500
Ultimate Tensile Strength (PSI) . . .	106,000	65,200

CHEMISTRY

Gold 60%
Silver 21%
Copper 14.5%
Palladium 3.5%

Contains less than 1%
Zinc, Indium, Iridium

Classification - High 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

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. The casting temperature is 1775°F (970°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: 585 Fine Solder
Flux: Brown Fluoride Flux