

JLCB

HIGH NOBLE YELLOW TYPE 4 CROWN & BRIDGE ALLOY

JLCB is an economical high noble crown and bridge alloy with 56% Au. Classified as a Type 4 alloy, JLCB is excellent for restorations subject to high stress such as bridges with three or more units and partial dentures. Described as a versatile alloy, JLCB can be bench cooled for partials and longer bridges, and water quenched for Type IV applications.

PROPERTIES		
Melting Range	1570° to 1680°F (855° to 915°C)	
Density	13.7 g/cm ³	
Grain Size	37 microns	
	HARDENED	SOFTENED
Hardness	260 HV	195 HV
Tensile Elongation	10%	13%
Tensile Yield Strength	104,000 psi (715 MPa)	76,000 psi (520 MPa)
Ultimate Tensile Strength	112,000 psi (770 MPa)	85,300 psi (585 MPa)

CHEMISTRY	
Gold	56%
Silver	26%
Copper	13%
Palladium	4%
Contains less than 1% Zinc, Indium, Iridium	
Au & Pt group - 60%	
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.

INVESTMENT AND BURNOUT

Either gypsum or phosphate bonded investment may be 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. Gas/compressed air or gas/oxygen flame with 5 psi gas pressure and 10 psi oxygen pressure is recommended. JLCB will fully puddle and form a ball before it is ready to cast. DO NOT OVERHEAT. 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

5007Y r1

