

JCB

HIGH NOBLE YELLOW TYPE 3 CROWN & BRIDGE ALLOY

JCB is a high noble, 62% Au crown and bridge alloy that has many applications. Bench cooling makes it ideal for crowns and bridges, while water quenching makes it perfect for inlays and onlays. JCB has a deep yellow color, polishes to a high sheen and is a cost-saving alternative to other, higher-content gold alloys.

PROPERTIES		
Melting Range	1625° to 1680°F (885° to 915°C)	
Density	14.2 g/cm ³	
Grain Size	15 microns	
	HARDENED	SOFTENED
Hardness	165HV	135HV
Tensile Elongation	26%	50%
Tensile Yield Strength	65,000 psi (450 MPa)	35,600 psi (240 MPa)
Ultimate Tensile Strength	84,000 psi (580 MPa)	60,300 psi (415 MPa)

CHEMISTRY	
Gold	62%
Silver	25%
Copper	9%
Palladium	3%
Contains less than 1% Zinc, Indium, Iridium	
Au & Pt group - 65%	
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 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 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: 615 Fine Solder
Flux: Brown Fluoride Flux

5005Y r1

