

JCBD

HIGH NOBLE YELLOW TYPE 4 CROWN & BRIDGE ALLOY

JCBD is a high noble, 60% Au crown and bridge alloy. As a Type 4 alloy, JCBD is excellent for restorations subject to high stress such as bridges with three or more units and partial dentures. JCBD is a very "workable" alloy. It can be softened for easy burnishing and hardened to raise the yield strength. JCBD offers a pleasing yellow color.

| PROPERTIES | | |
|---------------------------|---------------------------------|----------------------|
| Melting Range | 1600° to 1660°F (870° to 905°C) | |
| Density | 13.5 g/cm ³ | |
| | HARDENED | SOFTENED |
| Hardness | 260HV | 180HV |
| Tensile Elongation | 14% | 35% |
| Tensile Yield Strength | 99,500 psi (695 MPa) | 50,500 psi (350 MPa) |
| Ultimate Tensile Strength | 106,000 psi (730 MPa) | 65,200 psi (430 MPa) |

| CHEMISTRY | |
|---------------------------------------------|-------|
| Gold | 60% |
| Silver | 21% |
| Copper | 14.5% |
| Palladium | 3.5% |
| Contains less than 1% Zinc, Indium, Iridium | |
| Au & Pt group - 63.5% | |
| 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. 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

5006Y r1

