

J-3

NOBLE YELLOW TYPE 4 CROWN & BRIDGE ALLOY

J-3 is a 50% Au noble crown and bridge alloy best known for its strength. An economical yellow alloy, J-3 is an excellent choice for restorations that must endure high stress such as removable partial dentures, hader bars, long span bridges, and implant structures. J-3 has a light-yellow gold color and melts, casts, and finishes with ease.

PROPERTIES	
Melting Range	1545° to 1625°F (840° to 885°C)
Density	12.9 g/cm ³
Hardness	230 HV
Tensile Elongation	13%
Tensile Yield Strength	91,500 psi (630 MPa)
Ultimate Tensile Strength	100,000 psi (690 MPa)

CHEMISTRY	
Gold	50%
Silver	29.5%
Copper	15.2%
Palladium	4%
Contains less than 1% Zinc, Indium, Iridium	
Au & Pt group - 54%	
Classification - Noble	

PROCESSING TECHNIQUE

SPRUING

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" to 3/8" long. Sprues longer than 3/8" should have a reservoir 1/16" from the pattern. Patterns should be a maximum of 1/4" from the top of the 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 pressure and 10 psi oxygen pressure is recommended. The alloy will fully puddle and form a ball before it is ready to cast. The casting temperature is 1725°F (940°C). Bench cool a dull red heat before quenching.

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

5046Y r2

