

SL-40

YELLOW CROWN AND BRIDGE ALLOY

SL-40 is a noble type III crown and bridge casting alloy. It is one of a group of five medium gold content casting alloys offered by Jensen Industries. SL-40 features 45% nobility, light yellow gold color, very high strength, moderate cost, and melts, casts, finishes and polishes like a very high gold content alloy. Processing of SL-40, due to its low vickers hardness and high percentage of elongation, is fast, easy and accurate.

PROPERTIES

Melting Range	1565°F to 1750°F
Density	12.7 g/cm ³
Hardness	140 HV
Tensile Elongation	18%
Tensile Yield Strength (PSI)	71,200
Ultimate Tensile Strength (PSI)	85,800

CHEMISTRY

Silver	45%
Gold	40%
Copper	8.5%
Palladium	5%
Zinc	1%

Contains less than 1%
Iridium

Classification - 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 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 machine are not required. Use a multi-orifice torch with 5 PSI gas and 10 PSI oxygen. The alloy will fully puddle and form a ball before it is ready to cast. **DO NOT OVERHEAT.** The casting temperature is 1850°F (1010°C). Bench cool to 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