

JMC

YELLOW CROWN AND BRIDGE ALLOY

JMC is a noble type III crowns and bridge casting alloy. It is one of a group of five medium gold content casting alloys offered by Jensen Industries. JMC features 53% nobility, light yellow gold color, high strength, moderate cost, and melts, casts, finishes and polishes like a very high gold content alloy. Processing of JMC, is fast, easy and accurate.

PROPERTIES

Melting Range..... 1645° F to 1810° F
Density..... 12.9 g/cm³
Grain Size..... 24 microns

	<u>HARDENED</u>	<u>SOFTENED</u>
Hardness	230HV	170HV
Tensile Elongation	14%	22%
Tensile Yield Strength (PSI)	76,000	47,000
Ultimate Tensile Strength (PSI)	94,700	68,000

CHEMISTRY

Gold..... 47%
Silver..... 39%
Copper..... 7%
Palladium..... 6%
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 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 1900°F (1040°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

