

**CLASSIC IV™**  
**HIGH NOBLE YELLOW CERAMIC ALLOY**

Classic IV is a high noble alloy for porcelain fused to metal restorations. Classic IV is distinguished among alloys of this type because of its unequalled yellow color and noticeably easier finishing. Classic IV has been shown non-toxic by MEM-Elution cytotoxicity testing and is palladium free. Classic IV is compatible with Creation™, Vintage<sup>1</sup>, Ceramco II<sup>1</sup>, and similar porcelains. Classic IV is recommended for single units and short span bridges subject to moderate stress.

**PROPERTIES\***

Melting Range . . . . . 1930°F to 2110°F  
Coefficient of Thermal Expansion  
    from 25°C to 500°C: . . . . . 14.2x10<sup>-6</sup>K<sup>-1</sup>  
    from 25°C to 600°C: . . . . . 14.4x10<sup>-6</sup>K<sup>-1</sup>  
Density . . . . . 19.0 g/cm<sup>3</sup>  
Grain Size. . . . . 12 microns

**CHEMISTRY**

Gold . . . . . 88%  
Platinum . . . . . 9.5%  
Indium . . . . . 1.5%  
Contains less than 1%  
Silver, Iron, Rhenium

Classification-High Noble  
Au & Pt group - 97.5%

	<u>Porcelain Fired</u>	<u>ISO Heat Treated**</u>
Hardness . . . . .	175 HV	160 HV
Tensile Elongation . . . . .	11%	14%
Tensile Yield Strength (PSI) . . . . .	55,800	50,000
Ultimate Tensile Strength (PSI) . . . . .	67,800	62,600
Modulus of Elasticity (PSI) . . . . .	12.5 x 10 <sup>6</sup>	12.5 x 10 <sup>6</sup>

**PROCESSING TECHNIQUE**

**WAXING AND SPRUING**

Wax to a minimum thickness of .3mm for single units and .5mm for bridge work. Avoid sharp angles and corners. 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 pattern. Patterns should be a maximum of 1/4" from top of investment.

**INVESTMENT**

A phosphate-bonded, high heat investment with or without carbon content is recommended.

**BURNOUT**

Place in a cold furnace and raise temperature to 1300°F (705°C). Hold at 1300°F (705°C) for one hour. Increase hold time for larger or multiple rings.

**MELTING AND CASTING**

Extra winds of the casting arm are not required. Use a multi-orifice torch with 10 PSI fuel and 20 PSI oxygen. The alloy will fully puddle and form a ball before it is ready to cast. **DO NOT OVERHEAT. DO NOT USE CASTING FLUX.** The casting temperature is 2210°F (1210°C).

**DEVESTING AND FINISHING**

Blast with aluminum oxide to remove investment particles. Finish with aluminum oxide stones (refer to our *Finishing and Polishing guide – Yellow Ceramic Alloys* for more information). Reblast porcelain receiving surface with non-recycled aluminum oxide. Clean in ultrasonic for 10 minutes in distilled water.

**CONDITIONING**

Oxidize from 1200°F to 1800°F in air. Hold for 5 minutes. Bench cool. Proceed with normal opaque technique.

**SOLDERS AND FLUX**

Pre-Solder: CPS Solder  
Post-Solder: 650 Solder  
Flux: Brown Fluoride Flux

<sup>1</sup> Not trademarks of Jensen Industries

\*Test methods conform to ISO Standard 9693 and ANSI/ADA Standard 38

\*\* 1742°F for 10 min.

