

CLASSIC IV

HIGH NOBLE YELLOW PORCELAIN ALLOY

CLASSIC IV, a high noble, 88% Au porcelain dental alloys is known for its unique qualities by technicians. CLASSIC IV has a deep yellow color that is perfect for cases with lingual collars or metal occlusion. Resistant to galling, CLASSIC IV is easy to finish and polishes to a beautiful luster.

PROPERTIES	
Melting Range	1930° to 2110°F (1055° to 1155°C)
Coefficient of Thermal Expansion	
from 25°C to 500°C:	14.2x10-6K ⁻¹
from 25°C to 600°C:	14.4x10-6K ⁻¹
Density	19.0 g/cm ³
Grain Size	12 microns

CHEMISTRY	
Gold	88%
Platinum	9.5%
Indium	1.5%
Contains less than 1% Silver, Iron, Rhenium	
Au & Pt group - 97.5%	
Classification - High Noble	

AFTER PORCELAIN FIRING	
Hardness	175 HV
Tensile Elongation	11%
Tensile Yield Strength	55,800 psi (385 MPa)
Ultimate Tensile Strength	67,800 psi (470 MPa)
Modulus of Elasticity	12.5 x 10 ⁶ psi (86,000 MPa)

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

1300°F (705°C)

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 nonrecycled aluminum oxide. Clean in ultrasonic for 10 minutes in distilled water.

OXIDATION

Oxidize from 1200°F (650°C) to 1800°F (980°C) at 145°F/min (80°C/min) in air with 5 minutes hold time. Bench cool. Proceed with normal opaque technique.

SOLDERS AND FLUX

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

5190Y r4

