

OVERTURE

HIGH NOBLE WHITE PORCELAIN ALLOY

OVERTURE was created for technicians wishing to use high gold alloy for any case that comes in to the lab. At 74.5% gold, OVERTURE has equivalent strength and a higher melting range than many 52% gold alloys, and can take as much if not more abuse than most mid-gold PFM alloys. Easily laser welded or pre-soldered, and ideally suited for long spans and implant frames when maximum gold content is desired. A true high nobility workhorse alloy, OVERTURE is compatible with virtually all conventional dental ceramics.

PROPERTIES	
Melting Range	2130° to 2300°F (1165° to 1260°C)
Coefficient of Thermal Expansion	
from 25°C to 500°C:	14.0x10-6C ⁻¹
from 25°C to 600°C:	14.2x10-6C ⁻¹
Density	16.6 g/cm ³
Grain Size	25 microns
Hardness	230 HV
Tensile Elongation	9%
Yield Stress, 0.2%	72,500 psi (500 MPa)
Ultimate Tensile Strength	92,820 psi (640 MPa)
Modulus of Elasticity	14.5 x 10 ⁶ psi

CHEMISTRY	
Gold	74.5%
Palladium	15.2%
Silver	5.0%
Platinum	3.0%
Tin	2.3%
Contains less than 1% Ruthenium, Rhenium	
Au & Pt Group - 92.7%	
Classification - High Noble	

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 sprue method is recommended for multi-units. Use at least an 8 gauge runner bar with 10 gauge connectors. The direct method may be used on single units and small bridges. Use no smaller than 10 gauge sprues with reservoirs 1/8" from the patterns. 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

1400°F (760°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 2400°F (1315°C).

DEVESTING AND FINISHING

Blast with aluminum oxide to remove investment particles. Finish with carbides or aluminum oxide stones. Reblast porcelain receiving surface with non-recycled 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 minute hold time. Bench cool. Proceed with normal opaque technique.

SOLDERS AND FLUX

Pre-Solder: PWS Solder or LX Solder
 Post-Solder: 1400 Solder
 Flux: Brown Fluoride Flux for both pre and post soldering

5220Y r1

