

VERITY

HIGH NOBLE WHITE CERAMIC ALLOY

PROPERTIES	
Melting Range	2065°-2345°F (1130°-1285°C)
Coefficient of Thermal Expansion	
from 25°-500°C	13.8
from 25°-600°C	14.1
Density	13.8 g/cm ³

CHEMISTRY	
Gold	45.0%
Palladium	44.2%
Indium	6.5%
Tin	2.2%
Gallium	2.0%
Contains less than 1% Rhenium	
Au & Pt group - 89.2%	
Classification - High Noble	

AFTER PORCELAIN FIRING	
Hardness	250 HV
Tensile Elongation	20%
TensileYield Strength/Proof Stress	81,220 psi (560 Mpa)
Ultimate Tensile Strength	111,680 psi (770 MPa)
Modulus of Elasticity	18.85 x 10 ⁶ psi (130 GPa)

PROCESSING TECHNIQUE

WAXING	0.3mm for single units and 0.5mm for bridgework
INVESTMENT	Phosphate-bonded high heat investment with or without carbon
BURNOUT	1550°F (850°C)
MELTING AND CASTING	Wind the casting arm one more time than normal (3-4 winds). Multi-orifice torch: 10 psi fuel and 20 psi oxygen (0.7 bars fuel and 1.4 bars oxygen). Heat until alloy is clear and fluid. DO NOT OVERHEAT. DO NOT USE CASTING FLUX. Casting temperature ~2400°F (1315°C).
FINISHING	Finish with aluminum oxide stones. Blast porcelain receiving surfaces with non-recycled aluminum oxide. Clean in ultrasonic for 10 minutes.
OXIDATION	Oxidize from 1200°F (650°C) to 1850°F (1010°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: P-80 or LX Solder Post-solder: 615 or 1400 Solder Flux: Brown Fluoride Flux (for both pre & post soldering)

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