JP-II

HIGH NOBLE YELLOW PORCELAIN ALLOY

JP-II is a high noble, yellow porcelain dental alloy that is perfect for just about any type of restoration, from single units to small-span bridges. Silver-free, JP-II offers a pleasant-yellow color with a very light oxide for superior shade control. The opaque layer will cover the coping easily and completely. JP-II is easier to polish than most yellow gold porcelain alloys and finishes to a fine luster.

PROPERTIES	
Melting Range	1990º to 2190ºF (1085º to 1200ºC)
Coefficient of Thermal Expansion	
from 25ºC to 500ºC:	$14.2x10\text{-}6C^{-1}$
from 25ºC to 600ºC:	$14.4x10\text{-}6C^{-1}$
Density	$18.5\ g/cm^3$
Grain Size	15 microns
Hardness	155 HV
Tensile Elongation	17%
Tensile Yield Strength	50,700 psi (350 MPa)
Ultimate Tensile Strength	64,200 psi (440 MPa)

CHEMISTRY	
Gold	87%
Platinum	7%
Palladium	4.5%
Contains less than 1% Tin, Indium, Iron, Rhenium	
Au & Pt group – 98.5%	
Classification - High Noble	

PROCESSING TECHNIQUE

WAXING Wax to a minimum thickness of .3mm for single units and .5mm for bridge work. Avoid sharp angles and corners.

SPRUING 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" (6mm) from top of investment.

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

BURNOUT 1350ºF (735ºC)

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 2290ºF (1255ºC).

DEVESTING AND FINISHING Blast with aluminum oxide to remove investment particles. Finish with carbides or 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 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: Spirit Solder or LX Solder
Post-Solder: 615 Solder
Flux: Brown Fluoride Flux for both pre and post soldering

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