

JP-80

HIGH NOBLE YELLOW PORCELAIN ALLOY

JP-80 is a high noble, 75% light-yellow porcelain dental alloy that is known for its strength. JP-80 is perfect for just about all types of pfm restorations, from single units to long-span bridges. JP-80's low hardness makes it perfect for cases with metal occlusion and its light oxide provides superior shade control. JP-80 has a very fine grain size resulting in no marginal flaking and it polishes to high gloss.

PROPERTIES	
Melting Range	2170° to 2260°F (1190° to 1235°C)
Coefficient of Thermal Expansion	
from 25°C to 500°C:	14.3x10-6C ⁻¹
from 25°C to 600°C:	14.6x10-6C ⁻¹
Density	16.0 g/cm ³
Grain Size	32 microns
Hardness	195 HV
Tensile Elongation	20%
Tensile Yield Strength	55,900 psi (385 MPa)
Ultimate Tensile Strength	74,200 psi (510 MPa)

CHEMISTRY	
Gold	75%
Palladium	10%
Silver	10%
Platinum	3%
Indium	2%
Contains less than 1% Rhenium	
Au & Pt group - 88%	
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" (6mm) to 3/8" (9mm) long. Sprues longer than 3/8" (9mm) should have a reservoir 1/16" (1.5mm) 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	1350°F (730°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 2350°F (1290°C).
DEVESTING AND FINISHING	Blast with aluminum oxide to remove investment particles. Shape and finish metal with aluminum oxide stones. Blast outer surface with non-recycled aluminum oxide (50 micron-white preferred). 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 minute hold time. Bench cool. Proceed with normal opaque technique.
SOLDERS AND FLUX	Pre-Solder: P-80 Solder or LX Solder Post-Solder: 1400 Solder Flux: Brown Fluoride Flux for both pre and post soldering

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