JP5 w/AU

NOBLE WHITE PORCELAIN ALLOY

JP5 w/Au is a noble, palladium-silver porcelain dental dental alloy that is ideal for just about any type of restoration, from single units to long-span bridges. JP5 w/Au has a very small grain size that helps eliminate hot tears and marginal flaking. Because it contains 35.5% silver, it is more economical than other similar alloys containing less silver and more palladium.

PROPERTIES	
Melting Range	2155º to 2310ºF (1180º to 1265ºC)
Coefficient of Thermal Expansion	
from 25ºC to 500ºC:	$14.8x10\text{-}6C^{-1}$
from 25ºC to 600ºC:	$15.2x10\text{-}6C^{-1}$
Density	$11.0\ g/cm^3$
Grain Size	14 microns
Hardness	250 HV
Tensile Elongation	14%
Tensile Yield Strength	87,500 psi (605 MPa)
Ultimate Tensile Strength	115,000 psi (795 MPa)

CHEMISTRY	
Palladium	53.5%
Silver	35.5%
Tin	8.5%
Gold	2%
Contains less than 1% Zinc, Ruthenium	
Au & Pt group - 55.5%	
Classification - Noble	

PROCESSING TECHNIQUE

WAXING Wax to a minimum of 0.3mm for single units and 0.5mm for bridge work. Avoid sharp angles and wax to provide for an even thickness of porcelain.

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 spruce 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 without carbon content is recommended.

BURNOUT 1400ºF (760ºC)

MELTING AND CASTING Wind casting arm one turn more than used for casting gold. Use a multi-orifice torch tip with 10 lbs. gas and 20 lbs. oxygen. Add 50% new metal to button. Use a high heat crucible. As the alloy melts, a cloudy surface will appear. Continue heating until the cloudy surface clears, before releasing the casting arm. DO NOT OVERHEAT. The casting temperature is 2400ºF (1315ºC). DO NOT USE CASTING FLUX.

DEVESTING AND FINISHING Blast with aluminum oxide to remove investment particles. Shape and finish down 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 vacuum with 5 minutes hold time. Bench cool. Proceed with normal opaque technique.

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

5191Y r2

Jensen Industries, Inc.
50 Stillman Road
North Haven, CT 06473 USA

EC REP
Jensen GmbH
Gustav – Werner Str. 1
D-72555 Metzingen
Freecall: 0800-8 57 32 30
info@jensendental.de www.jensendental.de

Jensen Technical Service is available 8:00 AM - 8:00 PM EST by calling **1-800-243-2000**

JENSEN DENTAL