PG-73

COMPOSITION					
Au	**Pt**	**Pd**	**Ag**	**Cu**	**Other**
73	**1.5**	**6**	**16**	**0**	**Zn Sn Ir**

Yellow Porcelain Alloy

HIGH NOBLE HN

APPLICATION

Single Units, Short & Long Span Bridges, Implants

SOLDER Pre: 760 Post: 720

TECHNICAL DATA

	HARDENED	
Vickers Hardness:	260	
Proof Stress:	81,000 psi	
Tensil Strength:	108,500 psi	
Elongation:	3%	
Melting Range:	1795-1960°F	/ 980-1070°C
Casting Temperature:	2280°F	/ 1250°C
Density g/cm^3:	15.7	
Thermal Expansion:	16.3 @ 500ºC	/ 16.8 @ 600ºC

TECHNICAL INSTRUCTIONS

WAXING: Maintain optimal pattern thickness of 0.3 – 0.5 mm. Build out deficient areas to insure uniform porcelain thickness. Avoid sharp corners and angles. Provide adequate bulk in connection areas.

SPRUING: *Direct*: Attach 8-10 gauge wax sprue with reservoirs to the heaviest portion of the pattern. Keep pattern(s) 1/4" from top of ring.

Indirect: Attach 10 gauge wax sprue to the heaviest portion of the pattern(s). Trim to 1/8" and attach a 6 gauge runner bar. Build up crucible former with soft wax and attach runner bar to crucible former with 2 or 3, 8 gauge gate sprues.

INVESTING: Use a high heat phosphate bonded investment as per manufacturer's instructions.

BURNOUT: After adequate set-up time, place the ring(s) in a room temperature oven and raise the temperature to 800°F (425°C) and hold for 30 minutes. Then raise the temperature to 1300°F (705°C) and hold for I hour plus 10 minutes for each additional ring. If you are using a rapid-fire investment, follow the manufacture's instructions.

CASTING: 2280°F (1250°C). Use either a natural gas/oxygen or a propane/oxygen torch with a multi-orifice tip. After casting, allow the ring to bench cool before devesting. Add 50% new metal to the cleaned buttons.

FINISHING: Grind the metal surfaces for porcelain application with non-contaminating aluminum oxide stones in one direction at a slow uniform speed. Blast with non-recycled 50 micron aluminum oxide. Clean in distilled water in an ultrasonic cleaner for 10 minutes.

OXIDATION: Place unit(s) in a preheated furnace at 1200°F (650°C) and raise the temperature to 1470°F (800°C) using vacuum. 2 minute hold. Remove this oxide layer completely by blasting with non-recycled 50 micron aluminum oxide. Clean in distilled water in an ultrasonic cleaner for 10 minutes.

OPAQUING: Follow the recommendations of the porcelain manufacturer. For a better bond, fire a thin wash 10-15ºF (10ºC) above normal temperature, followed by regular opaque coats.

HARDENING: 840°F (450°C) for 15 minutes and air cool.