Legend 75+ is een al heel lang bestaand type opbakmetaal. De basis is palladium (75%). Mede door de 6% goud en 6,5% zilver zijn de verwerkingseigenschappen uitstekend.
Legend 75+ is prima te gieten, mooi uit te werken en te bakken. Geschikt voor normaal smeltende keramieken.

- WAK: 14,5 (bij 600 °C)
- Vickershardheid: 265
- Smeltinterval: 1143-1237 °C
- Soortelijk gewicht: 11,4

Alloy Specification Sheet

LEGEND 75+

Color: WHITE **Type:** 4 **ADA Classification:** NOBLE (N) **PGM:** 81.5%

Metal Content %

Au	Pd	Ag	Ru	In	Ga
6	75	6.5	x	6	6

'x' denotes a content of less than one percent.

Thermal Properties

Melting Range	Casting Temperature	Coefficient of Linear Thermal Expansion (um/m-ºC)	
2085-2265 ºF	2535 ºF	**25-500**	**25-600**
1140-1240 ºC	1390 ºC	14.3	14.5

Mechanical Properties

Vickers Hardness (VHN)			Yield Strength (0.2% Offset)		Modulus of Elasticity (GPa)	Elongation (%)		Density (g/cm³)
A.F.	Soft	Hard	A.F.	Hard		A.F.	Hard	
250	---	265	81,900 psi 565 MPa	87,000 psi 600 MPa	111	32	30	11.4

PROCESS	INSTRUCTIONS FOR USE
Modeling	Maintain a minimum wax thickness of 0.3 to 0.4 mm. The wax pattern design should have lingual collars and no sharp corners. Lingual eyelet rings help support castings during firing.
Spruing (Single Crowns)	Use direct sprues, 8-10 gauge, (3.3-2.6 mm diameter) and 1/2 in. (12 mm) long with adequate reservoirs. There should be no more than 1/4 in. (6 mm) of investment from the top of the pattern to the top of the investment.

Spruing (Multi-Units & Bridges)	Use a 6 gauge (4.1 mm diameter) runner bar, connecting the units to the bar with 10 gauge (2.6 mm diameter) sprues 1/8 in. (3 mm)long and joining the bar to the sprue base with 8 gauge (3.3 mm diameter) and 1/2in. (12 mm) long sprues coming from a domed central entry point. There should be no more than 1/4 in. (6 mm) of investment from the top of the pattern to the top of the investment.	
Alloy Quantity	11.4 g/cm^3 * (Wax Weight) = Required Alloy Quantity.	
Investing	Use debubblizer and blow off any excess before investing. Recommended Investment:Phosphate Bonded (Carbon Free) . Follow the manufacturer's instructions.	
Burnout	After adequate set-up time, place the ring(s) in a room temperature oven and raise the temperature to 815 °C / 1500 °F for 1 hour plus 10 minutes for each additional ring. If you are using a rapid fire investment, follow the manufacturer's instructions.	
Reusing Cast Alloy	Use only clean buttons and at least 35 percent new alloy.	
Crucible Type	Ceramic	
Torch Casting	Use either a Neutral gas/oxygen or a propane/oxygen torch with a multi-orifice tip. Ensure that the flame is on a Neutral setting when casting. The fuel proportions should be one-part fuel to two-parts oxygen	
Induction or Electrical Casting	Use a ceramic crucible and a casting temperature of a least 150°C / 300°F over liquidus temperature. Every casting machine is different. The casting temperature may require adjustment based upon the alloy and the amount of metal being cast.	
Cooling	Allow casting ring to cool to room temperature. DO NOT quench in water.	
Divesting and Cleaning	Divest and sandblast with 50 micron aluminum oxide, be careful of margins.	
Finishing	Grind the metal surfaces for porcelain application with non-contaminating aluminum oxide stones in one direction. Blast with non-recycled 50 micron aluminum oxide. Do not exceed a blast pressure of 4 bars or 60 psi. Clean in distilled water in an ultrasonic cleaner for 10 minutes.	
Oxydizing or Degassing	650-1010°C, 1200-1850°F,	hold 5 min, remove oxide, no vacuum

Presolder	Solder joints should be as large as possible (at least 5 mm²). Soldering gap approximately 0.05-0.2 mm. The solder joints should be parallel and free of debris. Preheat invested units and pressure blast with 50 micron just before soldering to remove oxide. If flux is used, it should be water soluble. Use: W, WSF INTERNATIONAL / U.S.
Porcelain Application	Follow the recommendations of the porcelain manufacturer. For a better bond, fire a thin wash 10 - 15 °F (10 °C) above normal temperature, followed by regular opaque coats. We recommend drying paste opaque from the inside out; this is done by utilizing a hot plate. The units are placed on a honeycomb sagger tray with metal pins. This is placed on top of the burner set a low to medium setting (approx. 250°F).it will take approximately 8-10 minutes or until the opaque turns chalky white or flat color. Then place in furnace for entry and maturing.
Post Soldering After Firing	Solder joints should be as large as possible (at least 5 mm²). Soldering gap approximately 0.05 - 0.2 mm. Cover ceramically-veneered units with wax before investing. The soldering investment should not come in contact with the ceramic. The soldering surfaces should be parallel, smooth and free of debris. Use: LO, 500 INTERNATIONAL / U.S.
Hardening	Heat Treat for 30 min. at 600°C / 1112°F
Laser Wire	LWL75
Polishing	For ceramic alloys use diamond paste and/or Tripoli and rouge with soft bristles and chamois wheels. High shine with clean soft bristle brushes and/or muslin wheel.