



The Argen Corporation

Alloy Specification Sheet

SLM Non-Precious (NP Premier)

Color: WHITE

Type: 4, PFM

ADA Classification: Predominantly Base (PB)

PGM: 0%

Metal Content % ('x' denotes a content of less than one percent)

Co	Cr	Mo	W	Si	Fe	Mn
61	25	6	5	<1	<1	<1

Thermal Properties

Melting Range	Casting Temperature	Coefficient of Linear Thermal Expansion	
2462 - 2525 °F	2705 °F	25-500	25-600
1350 - 1385 °C	1485 °C	14.1	14.5

Mechanical Properties

('A.F.' stands for after porcelain firing)

Vickers Hardness	Yield Strength	Modulus of Elasticity	Elongation	Density
(VHN)	(0.2% Offset)	(GPa)	%	g/cm³
A.F.	A.F.	223	A.F.	8.6
365	68,800 psi		8	
	475 MPa			

PROCESS

INSTRUCTIONS FOR USE

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.

Oxidizing or Degassing

650-1010°C, Hold 0 min with Vacuum, Remove oxide by sandblasting.

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: Co/Cr Pre

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瓷ally-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, R

Laser Wire

LWNPCO

Polishing

Use Tripoli and rouge or other similar products.