

Argelite 61

“Argelite 61 is a white, micro-fine grain porcelain bonding alloy formulated to be compatible with most dental porcelains.”

Composition

pd	Ag	Sn	In	Ga	Ru
60.55%	28.1%	2.5%	6.6%	2.1%	<1.0%

Technical Data

Type	Melting Range °C	Modulus of Elasticity MPa	Density gm/cc	CTE $\times 10^{-6}/^{\circ}\text{C}$ at 25-600°C
PFM	1130-1275	131,000	11.2	14.7

Vickers Hardness DPN		Yield Stress MPa (0.2% offset)		Tensile Stress MPa		Elongation %	
S	H	S	H	S	H	S	H
-	310	-	742	-	997	-	13

Solders

Pre-solder	Argesol W
Post-solder	Argesol Lo

Laser Wire

Laser Wire	LWL 61
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Argelite 61

Argelite 61 is a white, micro-fine grain porcelain bonding alloy formulated to be compatible with most dental porcelains. Its superior physical properties and easy melting characteristics allow the fabrication of all types of crown and bridgework.

Instructions for use:

Spruing	Single:	Use direct spruing with adequate reservoirs. Use 2.5 mm to 3.5 mm diameter sprues, 10 – 15 mm in length.
	Multiple:	Use indirect spruing with 4.0 mm diameter reservoir bars. Use 2.5 mm diameter sprues from the crowns to the reservoir bar and 3.5 mm diameter sprues from the reservoir bar to the sprue former cone.
Investment:	A high quality phosphate-bonded investment is required. Follow the manufacturer's instructions.	
Burnout:	After adequate bench setting, place the invested ring into a room temperature furnace and raise the temperature to 430°C and heatsoak for 30 minutes. Then raise the temperature to 816°C and heatsoak for a minimum of 40 minutes. For rapid burnout techniques, follow the investment manufacturer's instructions.	
Melting:	It is recommended to use a quartz crucible using propane/oxygen or gas/oxygen torch with a multi-orifice tip. If using an induction casting machine, set the temperature to 1371°C and melt in a ceramic crucible. Do not use flux. After casting, allow the ring to bench cool before devesting. Add 50% new alloy to the clean buttons.	
Finishing:	Grind the alloy with non-contaminating aluminum oxide stones. After grinding, a light microblasting with non-recycled 50 micron aluminum oxide grit is recommended. Steam clean or clean in distilled water using an ultrasonic cleaner for 5 minutes.	
Oxidation:	Insert the casting into the porcelain furnace at 600°C. Raise the temperature to 1038°C without vacuum. Hold for 10 minutes. A light oxide will form. Removal of the oxide layer is optional.	
Porcelain application:	Follow the recommendations of the porcelain manufacturer. Ideally the opaque material should be fired in two layers. First, a wash opaque, followed by a regular opaque layer. It may be necessary to use a purging rod during all dentine firing and glaze cycles. A purging cycle should be carried out at least once a week.	
Polishing:	The oxide layer is removed using a rubber wheel or a fine sandpaper disc before buffing with polishing wheels or diamond paste.	