

## TECHNICAL DATA SHEET

### STAR497N - 930 ‰

Universal master alloy for the production of 800 - 930 ‰ sterling silver jewellery obtained by investment casting and mechanical working. The elements contained in this product ensure a high surface quality in investment casting, while in mechanical working a high deformation capability thanks the small grain structure, making it suitable for the production of hand and machine made hollow and solid chains, deep drawn items and tube.

TAB.1 - Mechanical data

Hardness as cast	78	HV
Hardness hardened	155	HV
Tensile strength	258	MPa
Yield strength	164	MPa
Elongation	31	%

TAB.2 - Physical data

Color	Silver		
Colour Coordinates	L*	91.38	
	a*	-0.83	
	b*	5.19	
Density	10.31	g/cm <sup>3</sup>	
Melting Range	Solidus:	793	°C
	Liquidus:	891	°C

TAB.3 - Heat treatments

Solution annealing	675 20	°C min
Recrystallization Annealing	675 20	°C min
Hardening	275 180	°C min

TAB.4 - Investment casting parameters

Premelting temperature		991	°C
Casting Temperature	Min:	941	°C
	Max:	1041	°C
Water investment powder ratio		36-38	%
Flask temperature	Min:	450	°C
	Max:	700	°C
Quenching time without stones in place	Min:	5	min
	Max:	20	min
Quenching time with stones in place		15	min in boiling water
Pickling	H2SO4:	20	%
	Temp:	50	°C
	Time:	50	min

TAB.5 - Mechanical working parameters

Premelting temperature		991	°C
Casting Temperature	Min:	941	°C
	Max:	1041	°C
First thickness reduction	Lamination:	50	%
	Drawing:	25	%
Following thickness reductions	Lamination:	75	%
	Drawing:	50	%
Pickling after annealing	H2SO4:	20	%
	Temp:	50	°C
	Time:	5	min