

## TECHNICAL DATA SHEET

### STAR713A - 585 ‰

Universal master alloy for the production of white palladium based 585 - 750 ‰ gold 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	180	HV
Hardness hardened	260	HV
Tensile strength	n.d.	
Yield strength	n.d.	
Elongation	n.d.	

TAB.2 - Physical data

Color	Standard white		
Colour Coordinates	L*:	84.49	
	a*:	5.73	
	b*:	14.72	
Density	13.30	g/cm <sup>3</sup>	
Melting Range	Solidus:	850	°C
	Liquidus:	900	°C

TAB.3 - Heat treatments

Solution annealing	650 30	°C min
Recrystallization Annealing	700 30	°C min
Hardening	300	°C
	180	min

TAB.4 - Investment casting parameters

Premelting temperature		1000	°C
Casting Temperature	Min:	950	°C
	Max:	1050	°C
Water investment powder ratio		36-38	%
Flask temperature	Min:	500	°C
	Max:	720	°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		1050	°C
Casting Temperature	Min:	1000	°C
	Max:	1100	°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