TECHNICAL DATA SHEET

STAR693 - 917 ‰

Universal master alloy for the production of yellow 875 - 917 ‰ 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. The use is suggested with the addition of 0 - 40 % of pure silver to the master alloy.

TAB.1 - Mechanical data

Hardness as cast	102	HV
Hardness hardened	n.d.	
Tensile strength	322	MPa
Yield strength	114	MPa
Elongation	42	%

TAB.2 - Physical data

Color		Deep yellow	
Colour Coordinates	L*: a*: b*:	83.38 10.14 22.49	
Density		18.47	g/cm3
Melting Range	Solidus: Liquidus:	923 943	°C °C

TAB.3 - Heat treatments

Solution annealing	675 20	°C min
Recrystallization Annealing	650 30	°C min
Hardening	n.d.	

TAB.4 - Investment casting parameters

Premelting temperature		1043	°C
Casting Temperature	Min:	993	°C
	Max:	1093	°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		1043	°C
Casting Temperature	Min:	993	°C
	Max:	1093	°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