



Metaltech srl | Via Saviabona 113/G | 36010 | Cavazzale di Monticello Conte Otto (VI) | ITALIA C.F. e P.IVA 03955300243 | Reg. Imprese VI: 03955300243 | REA: VI - 367516 | Cap. Soc. € 10.000,00 i.v.





# TECHNICAL DATA SHEET STAR693L + Ag4% - 417 %

Universal master alloy for the production of red 375 - 417 - 585 % 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 - 10 % of pure silver to the master alloy.

### TAB.1 - Mechanical data

Hardness as cast	98	HV
Hardness hardened	n.d.	
Tensile strength	477	MPa
Yield strength	236	MPa
Elongation	29	%

### TAB.2 - Physical data

Color		Deep red	
Colour Coordinates	L*: a*: b*:	88.10 9.26 14.72	
Density		11.38	g/cm3
Melting Range	Solidus: Liquidus:	951 975	°C °C

### TAB.3 - Heat treatments

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











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# TAB.4 - Investment casting parameters

Premelting temperature		1075	°C
Casting Temperature	Min:	1025	°C
	Max:	1125	°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		1075	°C
Casting Temperature	Min:	1025	°C
	Max:	1125	°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