

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.



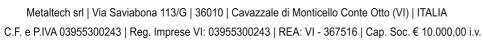
# **TECHNICAL DATA SHEET**

## WHITECH15M - 417 ‰

Master alloy for the production of white nickel and palladium free 375 - 417 - 585 ‰ gold jewellery obtained by mechanical working. This product, thanks to its complex composition made of numerous different special elements, ensures an extreme quality, an enhanced fluidity and a long lasting of this features also after many reuses of scraps, making it the most advanced nichel free master alloy for white gold.

	TAB.1 - Mechanical data				
Hardness as cast		150	HV		
Hardness hardened		n.d.			
Tensile strength		n.d.			
Yield strength		n.d.			
Elongation		n.d.			
	TAB.2 - Physical data				
Color	Standard white				
Colour Coordinates					
Density		12.75	g/cm3		
Melting Range	Solidus: Liquidus:	845 945	°C °C		
TAB.3 - Heat treatments					
Solution annealing		630 30	°C min		
Recrystallization Annealing		630 30	°C min		
Hardening		300 180	°C min		







#### TAB.4 - Mechanical working parameters

Premelting temperature			see paragraph below
Casting Temperature	Min:	995	°C
	Max:	1095	°C
First thickness reduction	Lamination:	50	%
	Drawing:	25	%
Following thickness reductions	Lamination:	70	%
	Drawing:	50	%
Pickling after annealing			see paragraph below

### **PREMELTING (MANDATORY)**

A premelting of the master alloy and fine gold must be done to homogenize the alloy in the best way. For a proper premelting, first put the fine gold in the crucible and then switch on the power until 1100°C (make sure that the metal becomes liquid). After this, put the master alloy inside the liquid gold and, with a stirrer, push down the master alloy inside the gold, then decrease the temperature to 950-1000°C and pour into an ingot or do a granulation.

#### PICKLING

For a proper pickling, use a concentrated solution of sulfuric acid at 60 - 65°C for 20 mins or a 50 % solution of hydrochloric acid at 60 - 65° C for 10 min.