

**MASTER
ALLOY**
WB140W 585‰

 MASTER ALLOY FOR MECHANICAL WORKING OF 375-585-750‰ (9-14-18 KT)
 WHITE GOLD

GENERAL INFORMATION
General information

Color	White
Color shade	Off-white
Production process	Mechanical working
Typology	Master alloy for gold

Melting temperatures

Liquidus [°C]	950.0
Solidus [°C]	920.0
Melting range [°C]	30.0

Commercial composition

Copper (%)	71,00
Nickel (%)	14,00
Zinc (%)	15,00



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

L*	85.3
a*	2.2
b*	12.3
c*	12.5
Yellow index	26.0

Physical characteristics

Density [g/cm ³]	12.7
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General characteristics

As cast grain size [μm]	300.0
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Product applications

CNC and lathe production
Cladding production
TIG tube production
Ingot casting
Production of tube from continuous casting
Continuous casting
Wire production
Sheet production

Mechanical characteristics

As cast hardness [HV 0.2]	145.0
Hardness after annealing [HV 0.2]	160.0
Hardness after 70% area red. [HV 0.2]	295.0
Tensile strength (Rm) [Mpa]	534.0
Yield strength (Rp0.2) [MPa]	292.0
Elongation at rupture (A) [%]	34.0

RELATED PRODUCTS LIST
Related Products

CUT10X2	Copper tube, 10.0 mm diameter, 2.0 mm wall thickness, 2500 mm length, cold worked
L1A	Powder for soldering of gold and silver chains
LSB442	Nickel-free master alloy for soldering of 375‰ (9 Kt) white gold
LSG406B	Master alloy for soldering of 750‰ (18 Kt) yellow gold
LSG409D	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG409V	Master alloy for soldering of 750‰ (18 Kt) yellow gold

Alternative Products

NI1811-04	Low nickel release master alloy for mechanical working of 750‰ (18 Kt) white gold
NI1811-05	Low nickel release master alloy for mechanical working of 585‰ (14 Kt) white gold

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CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 1070.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	720.0	1055.0	1085.0
0.5 - 1.2 mm	580.0	650.0	1035.0	1055.0
> 1.2 mm	460.0	600.0	1015.0	1035.0

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1070.0

Reductions

Sheet - area or thickness (%)	75.0
Wire - diameter (%)	45.0

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot from [°C]	Ingot to [°C]
Temperatures	1050.0	1130.0	1030.0	1070.0

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
<1 mm	660.0	700.0	30.0
1 - 5 mm	660.0	700.0	35.0
>5 mm	660.0	700.0	40.0

Mechanical working quenching

Let cool in air down to 550°C, then quench in a 50% water/50% alcohol solution or in water