

**MASTER
ALLOY**
OB304R 750‰

 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]	940.0
Solidus [°C]	915.0
Melting range [°C]	25.0

Commercial composition

Copper (%)	66,00
Nickel (%)	21,00
Zinc (%)	13,00



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

L*	86.2
a*	2.6
b*	11.8
c*	12.1
Yellow index	25.3

Physical characteristics

Density [g/cm ³]	14.6
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General characteristics

As cast grain size [μm]	50.0
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Product applications

Continuous casting
Sheet production
Blanking production
Stamping production
Age-hardening
Cladding production
TIG tube production
Ingot casting
Wire production

Mechanical characteristics

As cast hardness [HV 0.2]	180.0
Hardness after annealing [HV 0.2]	190.0
Hardness after 70% area red. [HV 0.2]	275.0
Single step age-hardening hardness [HV 0.2]	230.0
Tensile strength (Rm) [Mpa]	521.0
Yield strength (Rp0.2) [MPa]	356.0
Elongation at rupture (A) [%]	36.0

RELATED PRODUCTS LIST
Related Products

FE5	Iron wire, 5.0 mm diameter, annealed
L1A	Powder for soldering of gold and silver chains
LSB455	Master alloy for soldering of 585‰ (14 Kt) white gold
LSB475A	Master alloy for soldering of 750‰ (18 Kt) white 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

NI1811-01	Low nickel release all-purpose master alloy for 750‰ (18 Kt) white gold
WE480CW1	Master alloy for mechanical working of 585-750‰ (14-18 Kt) white gold

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1060.0

Reductions

Sheet - area or thickness (%) 70.0

Wire - diameter (%) 45.0

POURING TEMPERATURES

Countinous from [°C]

Countinous to [°C]

Ingot from [°C]

Ingot to [°C]

Temperatures

1040.0

1120.0

1020.0

1060.0

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

AGE HARDENING PROCESSING PARAMETERS
SINGLE STEP AGE-HARDENING TREATMENT

Temperature [°C]

Time [min]

Quenching

Age-hardening

275.0

90.0

Air or in furnace