MASTER ALLOY

TECHNICAL SHEET

OB304R 375‰

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

GENERAL INFORMATION

General information	
Color	White
Color shade	Premium white
Production process	Mechanical working
Typology	Master alloy for gold

Melting temperatures	
Solidus [°C]	995.0
Melting range [°C]	60.0
Liquidus [°C]	1055.0

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

GOLD line

FULL CHARACTERIZATION DATA

Color coordinates	
L*	83.0
a*	0.9
b*	7.7
c*	7.8
Yellow index	17.2

Physical characteristics	
Density [g/cm³]	11.0

Mechanical characteristics	
As cast hardness [HV 0.2]	150.0
Hardness after annealing [HV 0.2]	165.0
Hardness after 70% area red. [HV 0.2]	290.0
Tensile strength (Rm) [Mpa]	558.0
Yield strength (Rp0.2) [MPa]	321.0
Elongation at rupture (A) [%]	29.0

Product applications
TIG tube production
Stamping production
Sheet production
Hollow chain production
Ingot casting
Continuous casting
Cladding production
Massive chain production

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

Print Date 15/11/2019

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MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C]	1175.0

Reductions	
Sheet - area or thickness (%)	60.0
Wire - diameter (%)	40.0

POURING TEMPERATURES	**Countinous from [°C]**	**Countinous to [°C]**	**Ingot from [°C]**	**Ingot to [°C]**
Temperatures	1155.0	1235.0	1135.0	1175.0

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

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