

**MASTER  
ALLOY**
**WB140C 375‰**

MASTER ALLOY FOR CASTING OF 375-585‰ (9-14 KT) WHITE GOLD

**GENERAL INFORMATION**
**General information**

Color	White
Color shade	Premium white
Typology	Master alloy for gold
Production process	Casting

**Melting temperatures**

Liquidus [°C]	925.0
Solidus [°C]	865.0
Melting range [°C]	60.0

**Commercial composition**

Silver (%)	15,00
Copper (%)	49,00
Nickel (%)	18,00
Zinc (%)	18,00



GOLD line

**FULL CHARACTERIZATION DATA**
**Color coordinates**

L*	87.0
a*	-0.1
b*	8.9
c*	8.9
Yellow index	17.9

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	11.1
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**General characteristics**

As cast grain size [μm]	25.0
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**Product applications**

Stone-in-place casting
Age-hardening
Casting in closed systems

**Mechanical characteristics**

As cast hardness [HV 0.2]	155.0
Hardness after annealing [HV 0.2]	185.0
Hardness after 70% area red. [HV 0.2]	290.0
Single step age-hardening hardness [HV 0.2]	205.0
Tensile strength (Rm) [Mpa]	658.0
Yield strength (Rp0.2) [MPa]	464.0
Elongation at rupture (A) [%]	25.0

**RELATED PRODUCTS LIST**
**Related Products**

LSB442	Nickel-free master alloy for soldering of 375‰ (9 Kt) white gold
LSB455	Master alloy for soldering of 585‰ (14 Kt) white gold

**Alternative Products**

WB142C	Master alloy for casting of 375-585-750‰ (9-14-18 Kt) white gold
WB143C	Master alloy for casting of 375-585‰ (9-14 Kt) white gold

**CASTING PROCESSING PARAMETERS**

Pre-mixing temperature [°C] 1045.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	720.0	1025.0	1055.0
0.5 - 1.2 mm	580.0	650.0	1005.0	1025.0
> 1.2 mm	460.0	600.0	985.0	1005.0

**Trees without stones**

Let the flask cool down for 10-15 minutes, then quench in water.

**Stone-in-place casting trees**

Let the flask cool down for 45-60 minutes, then quench in water.

**Pickling**

Dip in RADIAL solution (50 g/l conc. at 60°C for 5-10 min.), or in sulphuric acid (10% conc. at 50°C for 10 min.)

**AGE HARDENING PROCESSING PARAMETERS**

SINGLE STEP AGE-HARDENING TREATMENT	Temperature [°C]	Time [min]	Quenching
Age-hardening	325.0	90.0	Air or in furnace