

**MASTER
ALLOY**
WB140C 585‰

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

GENERAL INFORMATION
General information

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

Melting temperatures

Liquidus [°C]	900.0
Solidus [°C]	830.0
Melting range [°C]	70.0

Commercial composition

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



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

L*	87.1
a*	0.7
b*	11.0
c*	11.0
Yellow index	22.2

General characteristics

As cast grain size [µm]	400.0
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Product applications

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

Mechanical characteristics

As cast hardness [HV 0.2]	165.0
Hardness after annealing [HV 0.2]	195.0
Hardness after 70% area red. [HV 0.2]	300.0
Single step age-hardening hardness [HV 0.2]	245.0
Tensile strength (Rm) [Mpa]	644.0
Yield strength (Rp0.2) [MPa]	463.0
Elongation at rupture (A) [%]	26.0

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] 1010.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	720.0	990.0	1020.0
0.5 - 1.2 mm	580.0	650.0	970.0	990.0
> 1.2 mm	460.0	600.0	950.0	970.0

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
	300.0	90.0	Air or in furnace