

GENERAL INFORMATION

General information

Typology	Master alloy for silver
Color	Silver
Production process	Casting
Grain refinement level	Low
Deoxidation level	Medium

Commercial composition (%)

CU	74.00
ZN	26.00

Melting Temperatures

Solidus [°C]	730.0
Liquidus [°C]	900.0
Melting range [°C]	170.0

FULL CHARACTERIZATION DATA

Color coordinates

L *	a*	b*	c*	Yellow Index
93.9	-0.6	6.2	6.2	12.0

Mechanical characteristics

As cast hardness [HV 0.2]	50.0
Hardness after 70% area red. [HV 0.2]	160.0
Hardness after annealing [HV 0.2]	70.0
Double step age-hardening hardness [HV 0.2]	110.0
Single step age-hardening hardness [HV 0.2]	80.0
Tensile strength (Rm) [Mpa]	251.0
Yield strength (Rp0.2) [MPa]	113.0
Elongation at rupture (A) [%]	26.0

Physical characteristics

Density [g/cm ³]	10.3
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General characteristics

As cast grain size [μm]	180.0
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Product applications

- Stone-in-place casting
- Casting in closed systems
- Casting in open systems
- Casting without stones

CASTING PROCESSING PARAMETERS

Pre-melting temperature

Temperature [°C] 1020

POURING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	560	600	1000	1030
0.5 - 1.2 mm	520	560	980	1000
> 1.2 mm	480	520	960	980

Trees without stones

Let the flask cool down in the chamber for 1 minute after pouring. Take the flask out of the machine without shaking it, let it cool for 15 minutes in air, then quench in water.

Stone-in-place casting trees

Let the flask cool down for 30-45 minutes, then quench it in water.

Pickling

Dip in RADIAL solution (50 g/l conc. at 60°C) for 2 minutes, or in sulphuric acid (10% concentration at 50°C) for 5 minutes.

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
Age-hardening	300	90	In air or in furnace
DOUBLE STEP	Temperature [°C]	Time [min]	Quenching
Homogenization	720	40.0	In water, immediate
Age-hardening	300.0	60.0	In air or in furnace