

GENERAL INFORMATION
General information

Typology	Master alloy for silver
Color	Silver
Production process	Casting
Grain refinement level	High
Deoxidation level	Very high

Commercial composition (%)

CU	70.0
ZN	30.0

Melting Temperatures

Solidus [°C]	710.0
Liquidus [°C]	880.0
Melting range [°C]	170.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
93.6	-0.5	4.0	4.0	8.3

Mechanical characteristics

As cast hardness [HV 0.2]	60.0
Hardness after 70% area red. [HV 0.2]	150.0
Hardness after annealing [HV 0.2]	65.0
Double step age-hardening hardness [HV 0.2]	115.0
Single step age-hardening hardness [HV 0.2]	85.0
Tensile strength (Rm) [Mpa]	229.0
Yield strength (Rp0.2) [MPa]	75.0
Elongation at rupture (A) [%]	34.0

Physical characteristics

Density [g/cm ³]	10.3
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General characteristics

As cast grain size [μm]	600.0
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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] 1000

POURING TEMPERATURES

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	640	680	1010	1030
0.5 - 1.2 mm	560	640	990	1010
> 1.2 mm	500	540	970	990

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

300.0

90.0

In air or in furnace

DOUBLE STEP

Temperature [°C]

Time [min]

Quenching

Homogenization

680.0

40.0

In water, immediate

Age-hardening

300.0

60.0

In air or in furnace