

**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 <sup>3</sup> ]	10.3
------------------------------	------

**General characteristics**

As cast grain size [μm]	600.0
-------------------------	-------

**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
AGE HARDENING	680.0	40.0	In water, immediate
AGE HARDENING	300.0	60.0	In air or in furnace