

GENERAL INFORMATION
General information

Typology	Master alloy for gold
Color	White
Color shade	Off-white
Production process	Casting
Grain refinement level	Low
Deoxidation level	Medium

Commercial composition (%)

CU	58.0
NI	19.0
ZN	16.0
AG	7.0

Melting Temperatures

Solidus [°C]	875.0
Liquidus [°C]	900.0
Melting range [°C]	25.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
82.1	1.8	12.3	12.4	26.4

Mechanical characteristics

As cast hardness [HV 0.2]	200.0
Hardness after 70% area red. [HV 0.2]	300.0
Hardness after annealing [HV 0.2]	190.0
Single step age-hardening hardness [HV 0.2]	280.0
Tensile strength (Rm) [Mpa]	534.0
Yield strength (Rp0.2) [MPa]	383.0
Elongation at rupture (A) [%]	36.0

Physical characteristics

Density [g/cm ³]	14.7
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General characteristics

As cast grain size [μm]	150.0
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Product applications

Stone-in-place casting
Casting in closed systems

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	660	720	1025	1055
0.5 - 1.2 mm	580	650	1005	1025
> 1.2 mm	460	600	985	1005

Trees without stones

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

Stone-in-place casting trees

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

Pickling

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

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
AGE HARDENING	250.0	90.0	In air or in furnace