

GENERAL INFORMATION
General information

Typology	Master alloy for gold
Color	White
Color shade	Standard white
Production process	Casting
Grain refinement level	Minimum
Deoxidation level	Medium

Commercial composition (%)

CU	49.0
NI	18.0
ZN	18.0
AG	15.0

Melting Temperatures

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

FULL CHARACTERIZATION DATA
Color coordinates

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

Mechanical characteristics

As cast hardness [HV 0.2]	165.0
Hardness after 70% area red. [HV 0.2]	300.0
Hardness after annealing [HV 0.2]	195.0
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

Physical characteristics

Density [g/cm ³]	13.0
------------------------------	------

General characteristics

As cast grain size [μm]	400.0
-------------------------	-------

Product applications

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

CASTING PROCESSING PARAMETERS
Pre-melting temperature

Temperature [°C] 1010

POURING TEMPERATURES

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	720	990	1020
0.5 - 1.2 mm	580	650	970	990
> 1.2 mm	460	600	950	970

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	300.0	90.0	In air or in furnace