

GENERAL INFORMATION
General information

Typology	Master alloy for gold
Color	Yellow
Color shade	Rich yellow
Production process	Casting
Grain refinement level	Medium
Deoxidation level	High

Commercial composition (%)

CU	50.0
AG	47.0
ZN	3.0

Melting Temperatures

Solidus [°C]	865.0
Liquidus [°C]	900.0
Melting range [°C]	35.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
86.2	4.7	23.1	23.6	

Mechanical characteristics

As cast hardness [HV 0.2]	135.0
Hardness after 70% area red. [HV 0.2]	270.0
Hardness after annealing [HV 0.2]	155.0
Single step age-hardening hardness [HV 0.2]	245.0
Tensile strength (Rm) [Mpa]	380.0
Yield strength (Rp0.2) [MPa]	290.0
Elongation at rupture (A) [%]	40.0

Physical characteristics

Density [g/cm ³]	15.0
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General characteristics

As cast grain size [μm]	400.0
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Product applications

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

C183N 750‰

MASTER ALLOY FOR CASTING OF 750‰ (18 KT) YELLOW GOLD

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	1000	1030
> 1.2 mm	460	600	960	980
0.5 - 1.2 mm	580	650	980	1000

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 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	275.0	90.0	In air or in furnace