

C182N 750‰

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

GENERAL INFORMATION

General information

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

Commercial composition (%)

AG	57.5
CU	39.0
ZN	3.5

Melting Temperatures

Solidus [°C]	860.0
Liquidus [°C]	910.0
Melting range [°C]	50.0

FULL CHARACTERIZATION DATA

Color coordinates

L *	a*	b*	c*	Yellow Index
87.9	2.6	23.5	23.7	

Mechanical characteristics

As cast hardness [HV 0.2]	130.0
Hardness after 70% area red. [HV 0.2]	200.0
Hardness after annealing [HV 0.2]	140.0
Single step age-hardening hardness [HV 0.2]	195.0
Tensile strength (Rm) [Mpa]	352.0
Yield strength (Rp0.2) [MPa]	249.0
Elongation at rupture (A) [%]	44.0

Physical characteristics

Density [g/cm³]	14.9
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General characteristics

As cast grain size [µm]	300.0
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Product applications

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

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CASTING PROCESSING PARAMETERS

Pre-melting temperature

Temperature [°C] 1030

POURING TEMPERATURES

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	720	1010	1040
0.5 - 1.2 mm	580	650	990	1010
> 1.2 mm	460	600	970	990

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	250.0	90.0	In air or in furnace