

**GENERAL INFORMATION**
**General information**

Typology	Master alloy for gold
Color	Yellow
Color shade	Light yellow
Production process	All-purpose
Grain refinement level	High
Deoxidation level	Minimum

**Commercial composition (%)**

AG	63.0
CU	37.0

**Melting Temperatures**

Solidus [°C]	885.0
Liquidus [°C]	935.0
Melting range [°C]	50.0

**FULL CHARACTERIZATION DATA**
**Color coordinates**

L *	a*	b*	c*	Yellow Index
87.6	3.0	24.7	24.9	

**Mechanical characteristics**

As cast hardness [HV 0.2]	120.0
Hardness after 70% area red. [HV 0.2]	235.0
Hardness after annealing [HV 0.2]	130.0
Single step age-hardening hardness [HV 0.2]	175.0
Tensile strength (Rm) [Mpa]	392.0
Yield strength (Rp0.2) [MPa]	258.0
Elongation at rupture (A) [%]	45.0

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	15.2
------------------------------	------

**General characteristics**

As cast grain size [μm]	65.0
-------------------------	------

**Product applications**

Continuous casting  
 Ingot casting  
 Casting in closed systems  
 Casting without stones  
 Handmade production  
 Massive chain production  
 Wire production  
 Sheet production  
 Stamping production

**CASTING PROCESSING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 1055

POURING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	720	1035	1065
0.5 - 1.2 mm	580	650	1015	1035
> 1.2 mm	460	600	995	1015

**Trees without stones**

Let the flask cool down for 5 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.

**MECHANICAL WORKING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 1055

**Reductions**

Wire - diameter (%)	45.0
Sheet - area or thickness (%)	70.0

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot to [°C]	Ingot from [°C]
Temperatures	1035	1115	1015	1055

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
< 1 mm	620	660	25
> 5 mm	620	660	30
1 - 5 mm	620	660	35

**Mechanical working quenching**

Quench directly in water.

**A182N 750‰**

ALL-PURPOSE MASTER ALLOY FOR 585-750‰ (14-18 KT) YELLOW GOLD

**AGE HARDENING PROCESSING PARAMETERS**

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
AGE HARDENING	275.0	90.0	In air or in furnace