

GENERAL INFORMATION

General information		Commercial composition (%)	
Typology	Master alloy for gold	CU	73.50
Color	Yellow	AG	13.50
Color shade	Rich yellow	ZN	13.00
Production process	All-purpose		
Grain refinement level	High		
Deoxidation level	Minimum		

Melting Temperatures

Solidus [°C]	845.0
Liquidus [°C]	910.0
Melting range [°C]	65.0

FULL CHARACTERIZATION DATA

Color coordinates

L *	a*	b*	c*	Yellow Index
87.4	3.0	18.9	19.1	

Mechanical characteristics

As cast hardness [HV 0.2]	115.0
Hardness after 70% area red. [HV 0.2]	260.0
Hardness after annealing [HV 0.2]	125.0
Single step age-hardening hardness [HV 0.2]	150.0
Tensile strength (Rm) [Mpa]	416.0
Yield strength (Rp0.2) [MPa]	217.0
Elongation at rupture (A) [%]	37.0

Physical characteristics

Density [g/cm ³]	10.9
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General characteristics

As cast grain size [µm]	180.0
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Product applications

Continuous casting
 Ingot casting
 Casting in closed systems
 Casting without stones
 CNC and lathe production
 Massive chain production
 Hollow chain production
 Wire production
 Sheet production
 Cladding production
 Stamping production
 Blanking production
 Production of tube from continuous casting
 TIG tube production

Y145T 375‰

ALL-PURPOSE MASTER ALLOY FOR 375-585‰ (9-14 KT) YELLOW GOLD

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

Trees without stones

Let the flask cool down for 10-15 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] 1030

Reductions

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

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot from [°C]	Ingot to [°C]
Temperatures	1010	1090	990	1030

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

Mechanical working quenching

Quench directly in 50%/50% water/alcohol solution or in water.

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
Age-hardening	325.0	90.0	In air or in furnace