

Y144W 375‰

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

GENERAL INFORMATION

General information

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

Commercial composition (%)

CU	68.0
ZN	16.0
AG	16.0

Melting Temperatures

Solidus [°C]	875.0
Liquidus [°C]	905.0
Melting range [°C]	30.0

FULL CHARACTERIZATION DATA

Color coordinates

L *	a*	b*	c*	Yellow Index
88.2	2.0	17.6	17.7	

Mechanical characteristics

As cast hardness [HV 0.2]	100.0
Hardness after 70% area red. [HV 0.2]	240.0
Hardness after annealing [HV 0.2]	125.0
Single step age-hardening hardness [HV 0.2]	145.0
Tensile strength (Rm) [Mpa]	447.0
Yield strength (Rp0.2) [MPa]	230.0
Elongation at rupture (A) [%]	38.0

Physical characteristics

Density [g/cm³]	11.0
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General characteristics

As cast grain size [µm]	150.0
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Product applications

Continuous casting
 Ingot casting
 CNC and lathe production
 Hollow chain production
 Wire production
 Sheet production
 Cladding production
 Production of tube from continuous casting
 TIG tube production

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CASTING PROCESSING PARAMETERS

Pre-melting temperature

Temperature [°C] 1025

POURING TEMPERATURES

	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660	720	995	1025
0.5 - 1.2 mm	580	650	975	995
> 1.2 mm	460	600	955	975

Trees without stones

Let the flask cool down for 10-15 minutes, then quench it in water.

MECHANICAL WORKING PARAMETERS

Pre-melting temperature

Temperature [°C] 1025

Reductions

Wire - diameter (%)	45.0
Sheet - area or thickness (%)	75.0

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot to [°C]	Ingot from [°C]
Temperatures	1005	1085	985	1025

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 water.

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AGE HARDENING PROCESSING PARAMETERS

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