

**MASTER
ALLOY**
Y144W 375‰

MASTER ALLOY FOR MECHANICAL WORKING OF 375-585‰ (9-14 KT) YELLOW GOLD

GENERAL INFORMATION
General information

Color	Yellow
Color shade	Rich yellow
Production process	Mechanical working
Typology	Master alloy for gold

Melting temperatures

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

Commercial composition

Silver (%)	16,00
Copper (%)	68,00
Zinc (%)	16,00



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

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

General characteristics

As cast grain size [µm]	150.0
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Mechanical characteristics

As cast hardness [HV 0.2]	100.0
Hardness after annealing [HV 0.2]	125.0
Hardness after 70% area red. [HV 0.2]	240.0
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

Product applications

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

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1025.0

Reductions

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

POURING TEMPERATURES

Countinous from [°C]

Countinous to [°C]

Ingot from [°C]

Ingot to [°C]

Temperatures

1005.0

1085.0

985.0

1025.0

MECHANICAL WORKING ANNEALING

Temp. from [°C]

Temp. to [°C]

Time [min]

<1 mm

620.0

660.0

25.0

1 - 5 mm

620.0

660.0

30.0

>5 mm

620.0

660.0

35.0

Mechanical working quenching

Quench directly in water

AGE HARDENING PROCESSING PARAMETERS
SINGLE STEP AGE-HARDENING TREATMENT

Temperature [°C]

Time [min]

Quenching

Age-hardening

275.0

90.0

Air or in furnace