

**MASTER
ALLOY**
Y145T 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]	910.0
Solidus [°C]	845.0
Melting range [°C]	65.0

Commercial composition

Silver (%)	14,00
Copper (%)	73,00
Zinc (%)	13,00



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

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

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

Mechanical characteristics

As cast hardness [HV 0.2]	115.0
Hardness after annealing [HV 0.2]	125.0
Hardness after 70% area red. [HV 0.2]	260.0
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

RELATED PRODUCTS LIST
Related Products

CUT10X2	Copper tube, 10.0 mm diameter, 2.0 mm wall thickness, 2500 mm length, cold worked
L1A	Powder for soldering of gold and silver chains
LSG409	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG409D	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG417F	Master alloy for soldering of 375-585‰ (9-14 Kt) yellow gold
LSG419	Master alloy for soldering of 375‰ (9Kt) yellow gold

Alternative Products

Y144W	Master alloy for mechanical working of 375-585‰ (9-14 Kt) yellow gold
C142GR	Master alloy for casting of 375-585‰ (9-14 Kt) yellow gold

MECHANICAL WORKING PARAMETERS

Pre-mixing temperature [°C] 1030.0

Reductions

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

POURING TEMPERATURES

Countinous from [°C]

Countinous to [°C]

Ingot from [°C]

Ingot to [°C]

Temperatures

1010.0

1090.0

990.0

1030.0

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 a 50% water/50% alcohol solution or in water

AGE HARDENING PROCESSING PARAMETERS
SINGLE STEP AGE-HARDENING TREATMENT

Temperature [°C]

Time [min]

Quenching

Age-hardening

325.0

90.0

Air or in furnace