

**MASTER  
ALLOY**
**YA144L 375‰**

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

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

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

**Melting temperatures**

Liquidus [°C]	915.0
Solidus [°C]	865.0
Melting range [°C]	50.0

**Commercial composition**

Silver (%)	5,50
Copper (%)	71,50
Zinc (%)	23,00



GOLD line

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

L*	91.8
a*	0.2
b*	20.7
c*	20.7

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	10.8
------------------------------	------

**General characteristics**

As cast grain size [μm]	170.0
-------------------------	-------

**Product applications**

Massive chain production
Sheet production
Stamping production
Hand production
Wire production
Continuous casting
Ingot casting
Casting in closed systems

**Mechanical characteristics**

As cast hardness [HV 0.2]	85.0
---------------------------	------

**RELATED PRODUCTS LIST**
**Related Products**

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**

B145	Master alloy for mechanical working of 375-585‰ (9-14 Kt) yellow gold
------	---

**CASTING PROCESSING PARAMETERS**

Pre-mixing temperature [°C] 1035.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	720.0	1015.0	1045.0
0.5 - 1.2 mm	580.0	650.0	995.0	1015.0
> 1.2 mm	460.0	600.0	975.0	995.0

**Trees without stones**

Let the flask cool down for 5 minutes, then quench in water.

**Stone-in-place casting trees**

Let the flask cool down for 30-45 minutes, then quench in water.

**Pickling**

Dip in RADIAL solution (50 g/l conc. at 60°C for 2 min.), or in sulphuric acid (10% conc. at 50°C for 5 min.)

**MECHANICAL WORKING PARAMETERS**

Pre-mixing temperature [°C] 1035.0

**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	1015.0	1095.0	995.0	1035.0

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