

**LSG419 375‰**

MASTER ALLOY FOR SOLDERING OF 375‰ (9KT) YELLOW GOLD

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

Typology	Gold solder
Color	Yellow
Color shade	Greenish yellow
Production process	Brazing
Grain refinement level	Minimum
Deoxidation level	Minimum

**Commercial composition (%)**

AG	50.0
CU	28.0
ZN	15.0
IN	7.0

**Melting Temperatures**

Solidus [°C]	620.0
Liquidus [°C]	680.0
Melting range [°C]	60.0

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

L *	a*	b*	c*	Yellow Index
87.7	-0.9	14.4	14.4	

**Mechanical characteristics**

As cast hardness [HV 0.2]	185.0
Hardness after 70% area red. [HV 0.2]	265.0
Tensile strength (Rm) [Mpa]	780.0
Yield strength (Rp0.2) [MPa]	540.0
Elongation at rupture (A) [%]	2.0

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	11.3
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**General characteristics**

As cast grain size [μm]	120.0
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**Product applications**

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**MECHANICAL WORKING PARAMETERS**
**Pre-melting temperature**

Temperature [°C] 800

**Reductions**

Wire - diameter (%)	30.0
Sheet - area or thickness (%)	50.0

**POURING TEMPERATURES**

Countinous from [°C]

Countinous to [°C]

Ingot to [°C]

Ingot from [°C]

Temperatures

780

860

760

800

**MECHANICAL WORKING ANNEALING**

Temp. from [°C]

Temp. to [°C]

Time [min]

&lt; 1 mm

500

530

15

&gt; 5 mm

500

530

20

1 - 5 mm

500

530

25

**Mechanical working quenching**

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

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**Preliminary checks**

Please note that in order to correctly evaluate the alloy's hardness to solderability, it is advised to make a numerical calculation by subtracting the base metal solidus temperature value from the solder liquidus temperature value. The higher the number resulting, the more solderable (or the less hard) the alloy can be considered. Please refer to the technical guideline for solders available in the website for further information.