

LSB442 375‰

NICKEL-FREE MASTER ALLOY FOR SOLDERING OF 375‰ (9 KT) WHITE GOLD

GENERAL INFORMATION
General information

Typology	Gold solder
Color	White
Color shade	Standard white
Production process	Brazing
Grain refinement level	Minimum
Deoxidation level	Minimum

Commercial composition (%)

AG	75.0
CU	13.0
ZN	8.0
IN	4.0

Melting Temperatures

Solidus [°C]	700.0
Liquidus [°C]	780.0
Melting range [°C]	80.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
88.8	-1.7	12.0	12.1	21.6

Mechanical characteristics

As cast hardness [HV 0.2]	180.0
Hardness after 70% area red. [HV 0.2]	230.0
Hardness after annealing [HV 0.2]	200.0
Tensile strength (Rm) [Mpa]	544.0
Yield strength (Rp0.2) [MPa]	442.0
Elongation at rupture (A) [%]	10.0

Physical characteristics

Density [g/cm ³]	11.5
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Product applications

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MECHANICAL WORKING PARAMETERS
Pre-melting temperature

Temperature [°C] 900

Reductions

Wire - diameter (%)	15.0
Sheet - area or thickness (%)	40.0

POURING TEMPERATURES

Countinous from [°C]

Countinous to [°C]

Ingot to [°C]

Ingot from [°C]

Temperatures

880

960

860

900

MECHANICAL WORKING ANNEALING

Temp. from [°C]

Temp. to [°C]

Time [min]

< 1 mm

540

560

15

> 5 mm

540

560

20

1 - 5 mm

540

560

25

Mechanical working quenching

Quench directly 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.