

**MASTER
ALLOY**
LSA425

MASTER ALLOY FOR SOLDERING OF SILVER

GENERAL INFORMATION
General information

Typology	Master alloy for silver
Color	Silver
Production process	Brazing
Grain refinement level	Minimum
Deoxidation level	Minimum

Commercial composition (%)

CU	58.0
ZN	30.0
IN	12.0

Melting Temperatures

Solidus [°C]	630.0
Liquidus [°C]	680.0
Melting range [°C]	50.0

FULL CHARACTERIZATION DATA
Color coordinates

L *	a*	b*	c*	Yellow Index
89.2	-1.0	14.5	14.5	26.2

Mechanical characteristics

As cast hardness [HV 0.2]	145.0
Tensile strength (Rm) [Mpa]	425.0
Yield strength (Rp0.2) [MPa]	311.0
Elongation at rupture (A) [%]	26.0

Physical characteristics

Density [g/cm ³]	9.5
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Product applications

MECHANICAL WORKING PARAMETERS
Pre-melting temperature

Temperature [°C]

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

780

860

760

800

MECHANICAL WORKING ANNEALING

Temp. from [°C]

Temp. to [°C]

Time [min]

< 1 mm

500

520

15

1 - 5 mm

500

520

20

> 5 mm

500

520

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.

Notes on alloy title

SOFT SOLDER: LSA425 40% + Ag 60%: T_{sol} 630 °C; T_{liq} 680 °C; R_m 423; R_p 311; A% 26.

MEDIUM SOLDER: LSA425 30% + Ag 70%: T_{sol} 665 °C; T_{liq} 725 °C; R_m 382; R_p 257; A% 28.

HARD SOLDER: LSA425 20% + Ag 80%: T_{sol} 695 °C; T_{liq} 790 °C; R_m 353; R_p 213; A% 33.

The information reported in the technical datasheet refer to a solder containing 60% silver.