

**GENERAL INFORMATION**
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Production process	Soldering and brazing
Color	Silver
Typology	Master alloy for silver

**Melting temperatures**

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

**Working temperatures**

Minimum working temperature [°C]	670.0
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**Commercial composition**

Copper (%)	50,00
Zinc (%)	30,00
Indium (%)	20,00



SILVER line

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

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

**Physical characteristics**

Density [g/cm <sup>3</sup> ]	9.5
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**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

**MECHANICAL WORKING PARAMETERS**

Pre-mixing temperature [°C] 800.0

**Reductions**

Sheet - area or thickness (%) 40.0

Wire - diameter (%) 15.0

**POURING TEMPERATURES**

Countinous from [°C]

Countinous to [°C]

Ingot from [°C]

Ingot to [°C]

Temperatures

780.0

860.0

760.0

800.0

**MECHANICAL WORKING ANNEALING**

Temp. from [°C]

Temp. to [°C]

Time [min]

<1 mm

500.0

520.0

15.0

1 - 5 mm

500.0

520.0

20.0

>5 mm

500.0

520.0

25.0

**Mechanical working quenching**

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

**PRODUCT TECHNICAL GUIDELINES****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<sub>sol</sub> 630°C; T<sub>liq</sub> 680°C; R<sub>m</sub> 423; R<sub>p</sub> 311; A% 26.

MEDIUM SOLDER: LSA425 30% + Ag 70%: T<sub>sol</sub> 665°C; T<sub>liq</sub> 725°C; R<sub>m</sub> 382; R<sub>p</sub> 257; A% 28.

HARD SOLDER: LSA425 20% + Ag 80%: T<sub>sol</sub> 695°C; T<sub>liq</sub> 790°C; R<sub>m</sub> 353; R<sub>p</sub> 213; A% 33.

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