LEGOR®

MASTER ALLOY

TECHNICAL SHEET

SILVER line

S925PT 925‰

ALL-PURPOSE MASTER ALLOY OF 800-925‰ SILVER

GENERAL INFORMATION

General information	
Typology	Master alloy for silver
Color	Silver
Production process	All-purpose
Grain refinement level	Very high
Deoxidation level	Minimum

Commercial composition (%)	
CU	93.0
ZN	7.0

Melting Temperatures	
Solidus [°C]	775.0
Liquidus [°C]	895.0
Melting range [°C]	120.0

FULL CHARACTERIZATION DATA

Color coordinates

L *	a*	b*	c*	Yellow Index
97.0	-0.1	3.7	3.7	6.7

Mechanical characteristics	
As cast hardness [HV 0.2]	60.0
Hardness after 70% area red. [HV 0.2]	160.0
Hardness after annealing [HV 0.2]	75.0
Double step age-hardening hardness [HV 0.2]	145.0
Single step age-hardening hardness [HV 0.2]	90.0
Tensile strength (Rm) [Mpa]	253.0
Yield strength (Rp0.2) [MPa]	134.0
Elongation at rupture (A) [%]	27.0

Physical characteristics	
Density [g/cm³]	10.3

General characteristics	
As cast grain size [µm]	100.0

Product applications

Continuous casting
Ingot casting
Casting in closed systems
Casting without stones
Massive chain production
Hollow chain production
Wire production
Sheet production
Stamping production
TIG tube production

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CASTING PROCESSING PARAMETERS

Pre-melting temperature

Temperature [°C]	1015

POURING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	640	680	995	1025
0.5 - 1.2 mm	560	640	975	995
> 1.2 mm	500	540	955	975

Trees without stones

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

Pickling

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

MECHANICAL WORKING PARAMETERS

Pre-melting temperature

Temperature [°C]	1015

Reductions

Wire - diameter (%)	45.0
Sheet - area or thickness (%)	70.0

POURING TEMPERATURES	Countinous from [°C]	Countinous to [°C]	Ingot to [°C]	Ingot from [°C]
Temperatures	995	1075	975	1015

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
< 1 mm	560	620	20
1 - 5 mm	560	620	25
> 5 mm	560	620	30

Mechanical working quenching

Quench directly in water.

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AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP	Temperature [°C]	Time [min]	Quenching
AGE HARDENING	300.0	90.0	In air or in furnace

DOUBLE STEP	Temperature [°C]	Time [min]	Quenching
AGE HARDENING	730.0	40.0	In water, immediate
AGE HARDENING	300.0	60.0	In air or in furnace

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