

TECHNICAL DATASHEET AND GUIDELINE

**S925PTA**  
Title 935 ‰

All-purpose ready-to-use 935‰ silver alloy in drops

## GENERAL INFORMATION

Typology	<b>Ready-to-use silver</b>
Production process	<b>Universal</b>
Color	<b>Silver</b>
Color shade	<b>--</b>
Density [g/cm <sup>3</sup> ]	<b>10.3</b>
<b>Melting temperatures</b>	
Solidus [°C]	<b>775</b>
Liquidus [°C]	<b>895</b>

<b>Commercial composition</b>	
Ag (%)	<b>94</b>
Cu (%)	<b>5.5</b>
Zn (%)	<b>0.5</b>



## FULL CHARACTERIZATION DATA

<b>General characteristics</b>	
As cast grain size [µm]	<b>150</b>
Fluidity (grid filling test) [%]	<b>60</b>
<b>Color coordinates</b>	
L*	<b>92.5</b>
a*	<b>-0.1</b>
b*	<b>5.6</b>
c*	<b>5.6</b>
Yellow index	<b>11.47</b>

<b>Mechanical characteristics</b>	
Tensile strength (Rm) [MPa]	<b>253</b>
Yield strength (Rp0.2) [MPa]	<b>134</b>
Elongation at rupture (A) [%]	<b>27</b>
As cast hardness [HV 0.2]	<b>59</b>
Hardness after 70% area red. [HV 0.2]	<b>160</b>
Hardness after 70% area red. [HV 0.2]	<b>160</b>
Hardness after annealing [HV 0.2]	<b>74</b>
Single step age-hardening hardness [HV 0.2]	<b>144</b>

## PRODUCT APPLICATIONS

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

TECHNICAL DATASHEET AND GUIDELINE

**S925PTA**  
Title 935 ‰

All-purpose ready-to-use 935‰ silver alloy in drops

## CASTING PROCESSING PARAMETERS

Casting temperatures	Metal - from [°C]	Metal - to [°C]	Flask - from [°C]	Flask - to [°C]
Thin (below 0.5 mm)	995	1025	560	600
Medium (from 0.5 to 1.2 mm)	975	995	520	560
Thick (above 1.2 mm)	955	975	480	520

**Trees without stones**

Let the flask cool down for 10-15 minutes, then quench in water.

**Pickling**

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

## MECHANICAL WORKING PARAMETERS

Casting temperature	Metal - from [°C]	Metal - to [°C]	Recommended reductions	
Ingot making	975	1015	Sheet - area or thickness [%]	70
Continuous casting	995	1075	Wire - diameter [%]	45

Mechanical working recommended annealing	Temperature - from [°C]	Temperature - to [°C]	Time [min]
> 5 mm	560	620	30
1 - 5 mm	560	620	25
< 1 mm	560	620	20

## AGE HARDENING PROCESSING PARAMETERS

Age-hardening using solubilization treatment	Temperature [°C]	Time [min]	Quenching
Solubilization	730	40	Water, immediate
Age-hardening	300	60	Air or in furnace

Single step age-hardening treatment	Temperature [°C]	Time [min]	Quenching
Age-hardening	300	60	Air or in furnace