

925 Standard Sterling Silver Alloy Properties and Process Data

- The industry standard silver
- General purpose alloy suitable for casting and wrought work, can also be used for spinning and pressing.
- **Note:** for deep spinning and pressing, Cooksongold recommend that Britannia silver is usually used.

Technical Information

Alloy Composition:

- 92.8% Silver
- + Copper

Properties

- Density 10.4 g/cm³
- Melting Range 805 – 890°C
- Annealed Hardness 70 +/- 5 HV
- 10% reduction of area 90 +/- 10 HV
- 25% reduction of area 110 +/- 10 HV
- 50% reduction of area 130 +/- 10 HV

Property Annealed

UTS	265 N/mm ²
Elongation	29%
Proof Stress	180 N/mm ²

Process Data

Rolling/Drawing/Spinning/Stamping:

May be cold worked up to 70% reduction of thickness between anneals.

Annealing:

The alloy may be annealed in a furnace at 650°C (time dependant on the size of workpiece). Alternatively, it may be heated to a dull red with a torch. The use of temperatures in excess 650°C can cause excessive grain growth and an “orange peel” surface on subsequent working. Annealing in oxidising conditions, i.e. in air, will discolour the surface due to the oxidation of copper in the alloy. Copper oxide is hard and brittle and if not removed from the surface can be forced into the silver on subsequent working to create hard spots. Cracking may occur in oxide-rich areas during further operations. Oxides can be removed from the surface by pickling in dilute (10%) sulphuric acid after every anneal in air.

Casting:

Can be cast into all forms and has excellent form filling capabilities. Please refer to the “Casting Alloys” datasheet for more information.

Machining:

For best results, the alloy must be machined in the cold condition.

Chain:

Can be used to manufacture all styles of chain.

Solders:

Any of the hallmarking quality silver solders supplied by Cookson may be used with this alloy.

Enamelling information:

The alloy can be enamelled successfully. Any oxide or surface imperfection must be removed prior to application..