

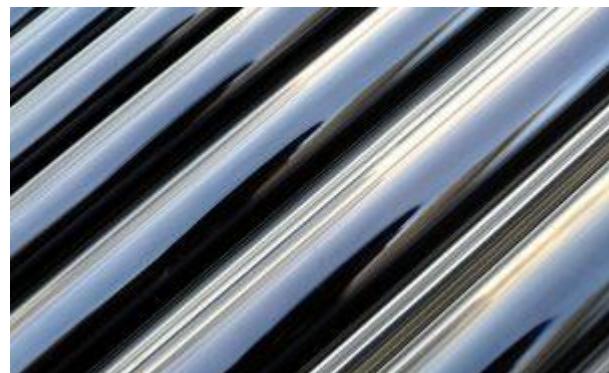


## Silver Steel

Quality precision ground silver steel delivered straight to your tool room.

**Silver steel bar stockholders and suppliers, delivering to the whole of the UK.**

West Yorkshire Steel are suppliers of precision ground silver steel bar and rod which finds innumerable uses in the tool room and in general engineering. The user can select a size suitable for his purpose, thereby reducing or eliminating the need for grinding or machining the finished part. The high carbon content aids the hardenability to give considerable wear resistance. The chromium content adds to the strength and hardness characteristics of silver steel. As supplied, however, it is machinable owing to the annealing treatment given in production. Silver steel bar is spheroidised annealed for best machinability, the annealed hardness being in the region of 270 Brinell (Rockwell C 27). With hardening and tempering, a hardness up to 64 Rockwell C can be obtained. Being in the spheroidised condition, it offers maximum response to hardening and the chromium content ensures deep hardening. Silver steel bar is a popular tool room material used in a wide range of applications. There is, of course, no silver in it, the term 'silver steel' is a traditional description. When the grade was first developed in the early 1900s the addition of chromium (which at the time was becoming increasingly popular as an alloying element in steel) gave the steel a bright 'silver' like finish.



Contact our experienced sales team who will assist you with your enquiry.

- Diameter

### Silver Steel Form of Supply

West Yorkshire Steel are suppliers of round bar in metric sizes from 2mm to 50mm diameter and imperial sizes from 1/16" to 2". Silver steel is stocked in lengths of 333mm, 1m, 2m and 3m. Subject to size suitability and availability non standard silver steel sizes and tolerances can be produced in approximately 2 to 3 weeks

## Applications

Silver steel can be used in numerous applications including screwdrivers, punches, shafts, axles, pinions, pins, die posts, instrument parts, model parts, taps and drills for mild steel, engravers' tools, and fine cutters.

## Typical Analysis

Carbon	1.00%	Silicon	0.30%
Chromium	0.40%	Manganese	0.35%

## Tolerances

As standard Silver Steel is produced and supplied as precision ground bar to h8 tolerance. If a tighter tolerance is required please contact our sales team as we can produce to tighter tolerances.

## Soft Annealing

Supplied in the annealed and machinable condition Silver Steel will only require re-annealing if the steel has been forged or hardened by the tool maker. To anneal, heat the tool steel slowly to 710-750°C, soak well (between 2 to 5 hours), slowly allow to cool in the furnace to about 600°C or below, before withdrawing. Annealed hardness will be about 220 Brinell.

## Stress Relieving

When heavily machined or otherwise subject to cold work, stress relieving can be carried out prior to hardening. Heat the component carefully to 650-680°C, soak well and allow to cool in air.

## Hardening

Heat uniformly to 780-810°C until heated through. Quench in water. Sizes up to 15mm dia may be oil hardened from 800-840°C.

## Tempering

Temper according to the purpose for which the parts are required, generally between 150-300°C.

## Heat Treatment

Silver steel bar is supplied annealed. When hardening consideration should be given to heat treatment temperatures, including rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each silver steel component. Other considerations during the heat treatment process include the type of furnace, quenching medium and work piece transfer facilities. Please consult your heat treatment provider for full guidance on heat treatment of silver steel bar.

## Quality Assured Supply

Silver steel is supplied in accordance with our ISO 9001:2015 registration.