

60WCrV8 Steel

60WCrV8 steel suppliers delivering throughout the UK. West Yorkshire Steel are suppliers of grade 60WCrV8 in round bar. As a shock resisting steel it is suited for both hot and cold work applications. The tungsten content of this steel grade confers fatigue resistance, the chromium content provides depth of hardness and resistance to abrasion. It is suitable for cold work tools subject to heavy shock. 60WCrV8 is also used with great success for chisels and punches required for heavy work on hard and tough materials. Suitable for hot work applications where high fatigue strength with medium hot hardness is desirable. Tools made from this steel can be water cooled in service with minimal risk of cracking.

We welcome export enquiries for 60WCrV8 tool steel. Contact our sales office and consult our [shipping policy](#) for further details.

Form of Supply

West Yorkshire Steel are suppliers of 60WCrV8 steel annealed round bar. Diameters can be sawn to required lengths as one offs or multiple cuts. 60WCrV8 ground tool steel bar can be supplied, providing a precision ground bar to your required tolerances.

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

- Diameter

Applications

Typical applications include mandrel bars for drawing steel tubes, swaging, forming and gripper dies, also punching, piercing, trimming dies and shear blades.

Analysis

| | | | |
|-----------|------------|-------------|------------|
| Carbon | 0.55-0.65% | Chromium | 0.90-1.20% |
| Manganese | 0.15-0.45% | Silicon | 0.70-1.00% |
| Tungsten | 1.70-2.20% | Phosphorous | 0.03% max |
| Vanadium | 0.10-0.20% | Sulphur | 0.03% max |

Forging

Heat the steel carefully to a temperature of 1000-1050°C and forge with light rapid blows. Reheat when temperature falls below 900°C if further work remains to be done. After forging, cool slowly, preferably in a furnace.

Annealing

Heat the component slowly and uniformly to 800-810°C. Soak thoroughly for two to three hours and cool slowly in the furnace. As 60WCrV8 is supplied in the annealed and machineable condition re-annealing will only be necessary if the steel has been forged or hardened.

Stress Relieving

If the machining operations have been severe, we recommend stabilising just before the tools are finish machined to relieve machining strains. Heat slowly to a temperature of 700°C, allow to cool in the air.

Hardening

Preheat at 650°C followed by rapid increase of temperature to 900-950°C. Quench in oil. Tempering is always recommended after hardening.

Tempering

Heat slowly to the required tempering temperature, soak thoroughly for two hours per 25mm section and allow to cool in air. For hot work applications, a minimum tempering temperature of 550°C should be used.

| | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|
| Temperature [°C] | 150 | 200 | 250 | 350 | 400 |
| Hardness [HRc] | 58-56 | 56-54 | 55-53 | 53-51 | 52-49 |

Heat Treatment

Heat treatment temperatures, such as rate of heating, cooling and soaking times will vary due to factors including the size and shape of each component. Other considerations during the hardening process include the type of furnace, quench medium and work piece transfer facilities. Please consult your heat treatment specialist for full guidance on heat treatment of 60WCrV8 steel.

Quality Assured Supply

60WCrV8 steel is supplied in accordance with our ISO 9001:2008 registration.