

## 60WCrV7 Steel

**60WCrV7 steel suppliers delivering to the whole of the UK.** West Yorkshire Steel are stockholders and suppliers of grade 60WCrV7 in round bar. As a shock resisting steel it is suited for both hot and cold work applications. It is suitable for cold work tools subject to heavy shock. 60WCrV7 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. The tungsten content of this steel grade confers fatigue resistance, the chromium content provides depth of hardness and resistance to abrasion.

We welcome export enquiries for 60WCrV7 steel. Contact our sales office and consult our [shipping policy](#) for further details.

### Form of Supply

We are suppliers of fully annealed 60WCrV7 steel round bar. Diameters can be sawn to required lengths as one offs or multiple cuts. 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 punching tools, trimming dies, shear blades, mandrel bars for drawing steel tubes, swaging, forming and gripper dies.

### Analysis

Carbon	0.55-0.65%	Chromium	0.90-1.20%
Manganese	0.15-0.45%	Silicon	0.50-0.70%
Tungsten	1.80-2.10%	Phosphorous	0.03% max
Vanadium	0.10-0.20%	Sulphur	0.03% max

## Forging

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

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## Annealing

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

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## Stress Relieving

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

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## Hardening

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

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## Tempering

Heat slowly to the required temperature, soak thoroughly for two hours per 25mm section air cool. For hot work applications, a minimum tempering temperature of 550°C is recommended.

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

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## 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 steel component. Other considerations during the hardening process include the furnace, quench medium and work piece transfer facilities. Please consult your heat treatment specialist for full guidance on heat treatment of 60WCrV7 grade of steel.

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## Quality Assured Supply

60WCrV7 steel is supplied in accordance with our ISO 9001:2008 registration.