

## HS6-5-2C High Speed Steel

**HS6-5-2C high speed steel suppliers delivering to the whole of the UK.** West Yorkshire Steel are suppliers of round bar, plate, sheet and rectangular block which can be cut to your specific requirements. It widely used in the production of machine tool bits, cold forming and cutting tools. It offers high toughness combined with good cutting powers and will withstand increases in temperature without losing its temper.

We welcome export enquiries for HS6-5-2C. Contact our sales office and consult our [shipping policy](#) for details.

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### Form of Supply

West Yorkshire Steel are suppliers of HS6-5-2C in the fully annealed condition. Round bar, flat bar, plate and block. The steel can be sawn to your required lengths as one offs or cut pieces. Rectangular pieces can be sawn from block to your specific sizes. Ground HS6-5-2C high speed steel bar can be supplied, providing a quality precision bar to tight tolerances.

This grade is also available as pre hardened tool bits.

Contact our experienced sales team who will assist you with your HS6-5-2C enquiry.

- Flat
- Diameter

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### Applications

Application include taps, milling tools, metal saws, twist drills, reamers and broaching tools.

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### Analysis

Carbon	0.86-0.94%	Chromium	3.80-4.50%
Manganese	0.40% max	Molybdenum	4.70-5.20%
Silicon	0.45% max	Vanadium	1.70-2.10%
Phosphorous	0.03% max	Tungsten	5.90-6.70%
Sulphur	0.03% max		

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## Ground Flat Stock

Precision ground flat stock / gauge plate can be produced. Subject to the size suitability and availability of raw material pieces can be produced in approximately 3 to 4 weeks. Standard and non-standard sizes can be produced.

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## Forging

Pre heat slowly to 850-900°C. The heat should be increased more quickly to the forging temperature of 1050-1150°C. If during the forging the temperature of the steel drops below 880-900°C then re heating will be necessary. After forging cool the component very slowly.

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## Annealing

Annealing is always recommended after hot working and before re hardening. Heat the steel to 850°C at a rate of no more than 220°C per hour. Hold at temperature for one hour per 25mm of thickness (with two hours being the minimum). Furnace cool slowly.

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## Stress Relieving

After heavy machining and prior to hardening it is recommended to stress relieve to minimise the possibility of distortion. To stress relieve the steel heat the component to 675-725°C and soak well (approx 2 hours), then cool in air.

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## Hardening

Pre heat the component to 450-500°C then up 850-900°C. Continue to heat to the final hardening temperature of 1200-1250°C and ensure that the steel is heated through. Care must be taken to not allow the component to remain too long at the hardening temperature. Quench in warm oil or salt. If quenching in salt allow the components to equalize, then complete the quench in air. If quenching in oil remove the component from the oil at about 500°C and then air cool. It is also suitable for vacuum hardening.

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## Tempering

Always temper the steel immediately after quenching. Heat uniformly to the selected tempering temperature and hold at for at least two hours (one hour per 25mm of total thickness). Double tempering is essential and for tools cut by wire EDM triple tempering is recommended.

<b>Temperature [°C]</b>	500	550	600	650
<b>Hardness [HRc]</b>	64	65	64	61

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## Heat Treatment

Heat treatment temperatures, such as rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each 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 specialist for full guidance on heat treatment of 60WCrV7.

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## Final Grinding

Select the correct grade of wheel in consultation with a grinding wheel manufacturer. Ensure the grinding wheel is in good quality by means of a suitable dressing tool. Wet grinding is a preferred option using a copious supply of coolant. If dry grinding is resorted to then use a soft wheel.

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## Quality Assured Supply

HS6-5-2C high speed steel is supplied in accordance with our ISO 9001:2008 registration.