1.2379 Tool Steel

Quality 1.2379 tool steel cut and delivered straight to your tool room, whatever size you need.

1.2379 tool steel stockholders and suppliers, delivering to the whole of the UK.

West Yorkshire Steel are suppliers of 1.2379 tool steel in round bar, plate, sheet and block which can be bandsaw cut to your requirements. A high carbon high chromium tool steel grade offering very high wear resistance and toughness. 1.2379 tool steel hardens in air with a low order of movement and offers a measure of corrosion resistance when polished. Commonly used for tools operating under conditions of severe wear and abrasion or as an alternative to oil hardening tool steel grades when long runs are required. Our comprehensive database includes tool steel brand names – specifications and grades old and new. If you do not find the specification you require on our website, please contact our sales team who may be able to assist you with your enquiry.

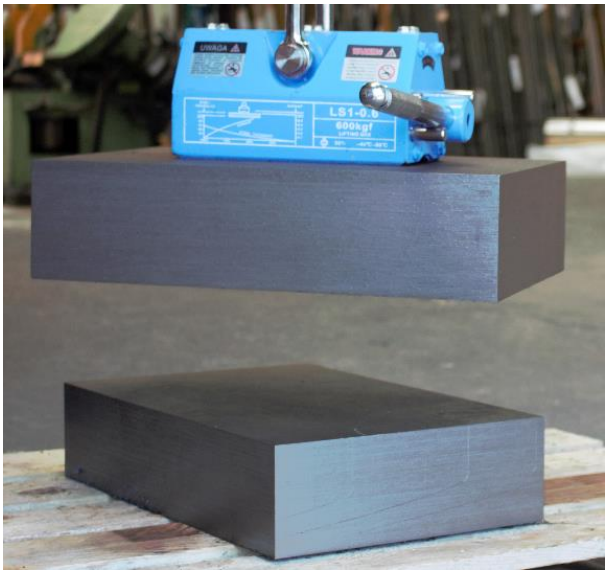
We welcome export enquiries for tool steel. Please contact our sales office and consult our shipping policy for further details.

Werkstoff tool steel grades we supply

1.2080 | 1.2083 | 1.2311 | 1.2312 | 1.2344
1.2363 | 1.2379 | 1.2436 | 1.2510 | 1.2550
1.2767 | 1.2842 | 1.3343

Form of Supply

West Yorkshire Steel are stockholders and suppliers of 1.2379 round bar, flat bar, plate and block. Diameters can be sawn to your required lengths as one offs or multiple cut pieces. Rectangular pieces can be sawn from flat bar or plate to your specific sizes.



Ground tool steel bar can be supplied, providing a quality precision finish bar to close tolerances.

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

- Sheet
- Flat
- Plate
- Diameter

Applications

A popular grade for toolmakers, 1.2379 is used in a wide variety of tool making applications. Typical applications include blanking dies and punches for sheet in stainless steel, brass, copper, zinc and hard abrasive materials generally. Other application include deep drawing dies, cupping dies, forming dies, sheet metal forming rolls, shear blades for strip and sheet including flying shears, circular cutters for cold rolled strip, trimmer dies, thread rolling dies, cold extrusion dies, broaches, plug gauges, ring gauges, special taps, straybolt taps, brick and tile mould liners, master hobs for cold hobbing plastic moulds and cut moulds for plastics.

Typical Analysis

Carbon	1.55%	Chromium	12.00%
Manganese	0.45%	Molybdenum	0.85%
Vanadium	0.80%		

Ground Flat Stock

Precision ground flat stock / gauge plate can be produced using 1.2379 tool steel. Subject to size, suitability and availability pieces can be produced in approximately 2 to 3 weeks. Standard and non-standard sizes are available.

Forging

Heat the 1.2379 tool steel slowly and uniformly to 700°C then more rapidly to 900-1040°C. After forging cool down slowly.

Annealing

1.2379 is supplied in the annealed and machineable condition. Re-annealing will only be necessary if the steel has been forged or hardened by the toolmaker. To anneal, heat slowly and uniformly to 900°C. Soak for three to four hours and allow to cool in the furnace to room temperature. Re-heat to 800-1040°C and again soak for three to four hours. Allow to cool in the furnace to room temperature.

Stress Relieving

When tools made from 1.2379 tool steel are heavily machined, ground or otherwise subjected to cold work, the relief of internal strains is advisable before hardening to minimise the possibility of distortion. Stress relieving should be done after rough machining. To stress relieve, heat the component to 600-650°C. Soak well and cool in the furnace or in air. The tools may then be finish machined before hardening.

Hardening

It is preferable to heat the tools in a controlled atmosphere. If this is not possible, pack hardening is recommended. A reducing atmosphere is desirable. Pre heat the 1.2379 tool steel component to 750-800°C. and allow to soak at this temperature. The tools may then be brought up to 1000-1040°C for air cooling, or 980°C for oil quenching. Soak thoroughly at the temperature for thirty minutes per 25mm of ruling section, then cool or quench accordingly. It is important not to exceed 1040°C when heating for hardening.

Martempering

Martempering is an alternative hardening procedure which may be used when suitable salt bath equipment is available. By this method internal strain, distortion and risk of quench cracking are reduced to the minimum. Preheat dry at 300-400°C. Pre-heat in salt at 800-850°C holding in the salt for ten minutes per inch of ruling section. Raise to the hardening temperature of 950-980°C holding in the salt for ten minutes per inch of ruling section. Marquench in salt at 230-250°C holding in the bath for five minutes 25mm of ruling section. Cool in still air. Tempering will be necessary.

Tempering

Double tempering is recommended. Tempering of 1.2379 tool steel should be done with the least possible delay after hardening, preferably when the tools are still hand warm. Select a suitable tempering temperature, bearing in mind the service requirements. Heat slowly and uniformly. When the 1.2379 component has reached the desired temperature, soak for at least one hour per 25mm of section. The second tempering should be a repetition of the first.

Temperature °C	150	200	250	300	350	400
Hardness HRc	62-61	61-60	60-59	57-56	56-55	56-55

Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each 1.2379 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 tool steels.

Final Grinding

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

Quality Assured Supply

1.2379 tool steel is supplied in accordance with our ISO 9001:2015 registration.

ISO 9001 CERTIFIED
British Assessment Bureau

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