

1.2842 Tool Steel

1.2842 tool steel suppliers and stockholders delivering to the whole of the UK. West Yorkshire Steel are stockholders and suppliers round bar. 1.2842 is an oil hardening tool steel type supplied in the annealed condition. Suitable for through hardening it offers characteristics of good durability, excellent wear resistance and holds a good cutting edge. It is a good quality general purpose tool steel often used where the expense of a high carbon high chromium grade is not justified.

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

Form of Supply

West Yorkshire Steel are stockholders and suppliers of round bar and flat bar. 1.2842 ground steel bar can be supplied, providing a high quality tool steel precision ground bar to tight tolerances.

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

- Plate
- Flat
- Diameter

Applications

Typical applications include medium run dies, press tools, drawing punches, broaches, bushings, lathe centres, chuck jaws, master cavity sinking hobs, plug gauges, thread gauges, thread cutting tools and precision measuring tools. It is also a popular tool steel for cams, cloth cutting knives, cold taps, reamers, collets, tube expander rolls, plastic moulds and woodworking knives, cutting hobs, strip slitting cutters and trimmer dies.

Analysis

Carbon	0.85-0.95%	Chromium	0.20-0.50%
Manganese	1.80-2.20%	Silicon	0.10-0.40%
Sulphur	0.03% max	Vanadium	0.05-0.20%
Phosphorous	0.03% max		

Forging

Heat the tool steel slowly and uniformly to 1000°C. Forge within a range of 1050-850°C reheating if necessary. Cool slowly (preferably in a furnace) to avoid setting up stresses.

Annealing

Heat uniformly to 720°C, equalise, then furnace cool. (Hardness about 229 Brinell). Fully machined tools in grade 1.2842 should be packed during annealing.

Hardening

Heat the 1.2842 uniformly to 790-820°C until heated through. (If possible pre-heat at 300-500°C). Allow 30 minutes per 25 millimetre of ruling section and quench immediately in oil.

Martempering

Martempering of 1.2842 is an alternative hardening procedure which may be used when suitable salt bath equipment is available.

Tempering

Heat the steel uniformly and thoroughly at the selected tempering temperatures and hold for at least one hour per 25mm of total thickness.

Temperature [°C]	100	150	200	250	300	400
Hardness [HRc]	64	63	62	60	56	50

Heat Treatment

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

1.2842 tool steel specification is supplied in accordance with our ISO 9001:2015 registration.