

1.2436 Tool Steel

1.2436 tool steel suppliers and stockholders delivering to the whole of the UK. West Yorkshire Steel are suppliers this high carbon high chromium tool steel in flat and round bar. This is a tool steel grade offering very high wear resistance with edge holding quality. It is an air hardening alloy tool steel with excellent resistance to wear and abrasion. As a high carbon high chromium tool steel 1.2436 has good through hardening properties and dimensional stability combined with high resistance to tempering.

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 1.2436 tool steel round bar and flat bar. Diameters can be sawn to your required lengths as one offs or multiple cut pieces. Rectangular pieces can be sawn from flat bar. Ground tool steel bar can be supplied, providing a quality precision ground bar to tight tolerances.

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

- Flat
 - Diameter
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Applications

Typical applications for 1.2436 tool steel include blanking and shearing tools, drawing tools, drawing dies, mandrels, press tools, forming tools and shear blades. It is suited to applications where maximum wear resistance is required.

Analysis

| | | | |
|-----------|------------|-------------|--------------|
| Carbon | 2.00-2.30% | Chromium | 11.00-13.00% |
| Manganese | 0.30-0.60% | Tungsten | 0.60-0.80% |
| Silicon | 0.10-0.40% | Phosphorous | 0.03% max |
| | | Sulphur | 0.03% max |

Forging

Heat slowly and uniformly to 700°C then more rapidly to 900-1050°C. After forging cool the steel slowly, preferably in a furnace.

Annealing

Anneal at 800-840°C and slow furnace cool. Hardness after annealing will be approximately 225 brinell.

Stress Relieving

If machining operations have been heavy or if the tool has an unbalanced section, remove stresses before hardening by heating up to 650-700°C, equalise, then cool slowly.

Hardening

Pre heat slowly to 750-800°C and thoroughly soak. Continue heating to the final hardening temperature of 950-980°C and allow the component to be heated through. Cool in air or quench in oil. 1.2436 is suitable for vacuum (high speed gas) hardening.

Tempering

Heat uniformly and thoroughly at the selected tempering temperature and hold for at least one hour per 25mm of total thickness. Double tempering should be carried out with intermediate cooling to room temperature.

| | | | | | | |
|-------------------------|-----|-----|-----|-----|-----|-----|
| Temperature [°C] | 100 | 200 | 300 | 400 | 500 | 600 |
| Hardness [HRc] | 63 | 62 | 60 | 58 | 56 | 48 |

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 1.2436 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

1.2436 tool steel is supplied in accordance with our ISO 9001:2015 registration.