

## BS4659 BS1 Tool Steel

**BS4659 BS1 tool steel stockholders and suppliers, delivering to the whole of the UK.** BS1 is an alloy shock-resisting tool steel for both hot and cold work applications available in round bar. BS1 is suitable for cold work and some hot work applications where high fatigue strength in combination with medium hot hardness is required. Heat treatment of BS1 gives depth of hardness and resistance to abrasion.

We welcome export enquiries for BS 4659 BS1 tool steel. Please contact our sales office and consult our [shipping policy](#) for further details.

### Related Specifications

ASTM A681 DIN 17350 BS EN ISO 4957

### Alternative BS4659 tool steel grades we supply

[BO1](#) | [BD2](#) | [BD3](#) | [BO2](#) | [BA2](#) | [BH13](#) | [BP20](#) | [BP30](#) | [BM2](#) | [BM35](#) | [BM42](#)

### Form of Supply

BS1 is available as round bar and can be sawn to your required lengths as one offs or multiple cut pieces. Ground tool steel BS1 bar can be supplied, providing a quality precision finished bar to your required tolerances.

Contact our experienced sales team who will assist you with your BS1 tool steel enquiry.

- Diameter

### Forging

Heat the steel to 1000-1050°C, forge with light rapid blows. Reheat if the temperature falls below 900°C. After forging, cool slowly.

### Typical Analysis

Carbon	0.45-0.55%	Chromium	1.20-1.70%
Silicon	0.70-1.00%	Tungsten	2.00-2.50%
Manganese	0.30-0.70%	Vanadium	0.10-0.30%

## Annealing

Heat the BS1 tool steel component slowly and uniformly to 790-820°C. Soak thoroughly for two to three hours and allow to cool slowly in the furnace.

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## Stress Relieving

Stress relieving is recommended for applications where distortion must be at a minimum or where the machining operations have been severe. Stress relieve just before the tools are finish machined in order to relieve machining strains. Heat the steel slowly to 700°C and allow to cool in air.

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## Hardening

Pre heat the steel to 650°C followed by rapid increase of temperature to the hardening temperature of 870-950°C. Quench in oil.

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## Tempering

Heat slowly to the required tempering temperature, between 200-650°C then soak thoroughly for two hours per 25mm section and allow to cool in still air. When using BS1 for hot work applications, a minimum tempering temperature of 550°C is advised.

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## 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 BS4659 BS1 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 steel BS1.

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## Quality Assured Supply

BS4659 BS1 tool steel is supplied in accordance with our ISO 9001:2015 registration.