



BO1 Tool Steel

FOR TOOLING & FORMING APPLICATIONS

We are a division of the Smiths Metal Centres Limited Group

Revision: tsm/heat-treated/bo1/10-03-23

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We stock **BO1 tool steel** which is oil-hardened containing chromium, vanadium & tungsten. The steel finds use in various applications, particularly in manufacturing much larger parts.

The material is an excellent general-purpose engineering tool steel. The oil-hardened product gives good wear and abrasion resistance. High hardness is another feature, as well as durability.

Chemical Composition (weight, %)

	C	Si	P	S	V	Mn	Cr	W	Ni	Cu
Min.	0.85					1.10	0.40	0.40		
Max.	1.00	0.40	0.035	0.035	0.25	1.35	0.60	0.60	0.40	0.20

* Properties as per BS 4659

Economical:

The product is a cost-effective alternative to high carbon/chromium tool steel, providing enough toughness for various engineering applications. In comparison, high carbon/chromium tool steel is more challenging to machine. With increased hardness, the steel does not require severe quenching - this reduces the risk of cracking and ensures excellent dimensional stability in hardening. An equivalent product grade is 1.2510 steel.

Machining:

The material offers little distortion, retaining its shape after hardening and tempering. Machining **BO1 tool steel** is good once annealed, with a rating of 90 (compared to 1% carbon steel which has a rating of 100). The grade also retains a good cutting edge. Welding is possible, but pre-heating is needed to avoid the risk of crack formation. The welding method depends on the use of the material.

Applications:

As the name suggests, tool steels find use in commercial engineering applications such as tooling and forming.

Engineering applications for **BO1 tool steel** include:

- Press tools, punches, dies and broaches
- Forming and raising tools where wear resistance is a consideration
- Tools for woodworking
- Measuring tools

Availability:

We stock **BO1 tool steel** in round and square bars of various diameters. We supply the product in standard lengths or cut to your specific size requirements.



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