

# D2 Tool Steel

AIR HARDENED ENGINEERING TOOL STEEL

We are a division of the Smiths Metal Centres Limited Group

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**D2 tool steel** is a high-carbon steel that is air-hardened and finds use in cutting tool, punch and die production.

D2 is a highly versatile engineering material which provides various performance benefits. Excellent wear resistance, superior toughness and hardness and good corrosion resistance are all features. **D2 tool steel** sharpens easily, which extends material life in areas such as cutting tools and knives.

### Chemical Composition (weight, %)

	C	Si	P	S	Mn	Cr	Mo	V	Ni	Cu
Min.	1.40					11.50	0.70	0.25		
Max.	1.60	0.60	0.035	0.035	0.60	12.50	1.20	1.00	0.40	0.20

\* Properties as per BS 4659

### Toughness and Hardness:

**D2 tool steel** is robust. The material is tough enough to withstand heavy impact and resists chipping and cracking. The hardness is ideal for cutting tools since the leading edge does not deform and will maintain a sharp, consistent edge.

### Wear Resistance:

Our product combines carbon, chromium and vanadium to create a material with excellent wear resistance. Including chromium also improves chemical resistance, making it suitable for various corrosive environments. While the alloy offers many benefits, wear resistance determines the suitability of this high-performance tool steel.

### Machining:

Machining requires a carbide or high-speed cutting tool with a suitable lubricant due to the alloy's hardness and toughness. Machining the material at a slow and even speed is also recommended. The material is susceptible to cracking and distortion during welding, so pre-heating the alloy using low-hydrogen welding electrodes is a must.

### Applications:

**D2 tool steel** finds use in applications including industrial blades, drill bits, punches, dies and tooling for plastic injection moulding. Other applications include cold-working in areas such as shearing, punching and blanking.

We stock **D2 tool steel** in round and square bars, which we supply as standard or cut lengths.

