

P20 (T51620)

Product Datasheet



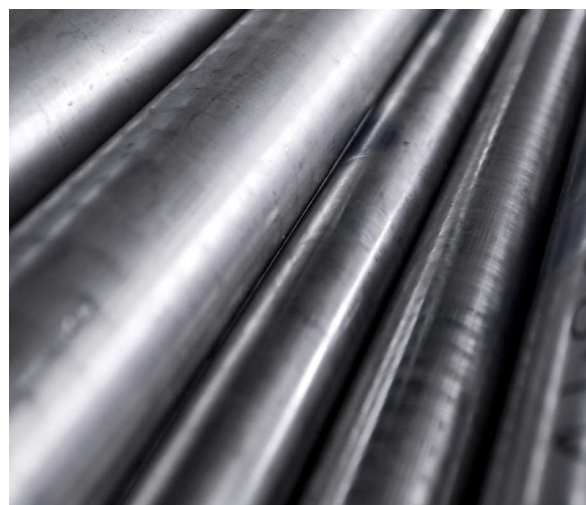
Tool Steel

Service. Quality. Value.

Mould Steel

P20 a versatile steel commonly used in the production of large mould frames & bolsters.

Characterised by good toughness at moderate strength levels, P20 tool steel is a highly versatile engineering material. The alloy is a pre-hardened plastic mould steel and provides unified hardness across wide sections. Typical applications for the alloy include tooling, die casting dies for zinc and machine cut plastic moulds. The inclusion of nickel and chromium during the alloying process enhances the hardness and toughness of the product. The product benefits from good weldability and offers an excellent polished finish. To achieve maximum surface hardness required in applications such as compression moulding plastic dies, case hardening or nitriding is an option.



Key Features

- Pre-hardened
- Good machinability
- Good weldability
- Good hardness
- Excellent polished finish

Applications

- Bolsters
- Injection moulds
- Deep set mould tools
- Die holders
- Casting dies

Chemical Composition (weight %)

	C	Mn	Si	Cr	Mo	Cu	P	S			
Min	0.28	0.6	0.2	1.4	0.3						
Max	0.4	1.0	0.8	2.0	0.55	0.25	0.03	0.03			

Mechanical Properties (typical)

Hardness Brinell	Hardness Rockwell	Tensile Strength Ultimate	Tensile Strength Yield	Elongation at break (in 50mm (2"))	Elastic Modulus
300	30	965 - 1030 MPa	827 - 862 MPa	20%	190 - 210 GPa

Tempering

Heat uniformly and soak at the tempering temperature for at least one hour per 25mm of section. Allow to cool in still air.

Temperature (°C)	100	200	300	400	500	600
Hardness (HRC)	51	50	48	46	42	36
Tensile (N/mm ²)	1730	1670	1570	1480	1330	1140

We stock P20 mould tool steel in round bar, flat bar and plate forms.

UK Service Centres:

Smiths Belfast **02895 908 897**
 Smiths Biggleswade **01767 604 704**
 Smiths Birmingham **0121 728 4940**
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 Main Office **0845 527 3331**

Quality & Testing:



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