P20 Datasheet

Sheffield Gauge Plate is the UK's leading stockholder and supplier of P20 (DIN 1.2311) tool steel. Our facilities can produce standard P20 steel in addition to P20S (DIN 1.2313), P20+S (DIN 1.7225) and P20N (DIN 1.2738) tool steel.

P20 Tool Steel Application

P20 steels are a highly versatile material characterised by their impressive toughness at moderate strength levels. The addition of chromium and nickel enhances the steel's toughness and hardness. Moreover, increased sulfur content can also improve the tool steel's machinability, providing more control and reliability.

These steels can be nitrided or case-hardened if maximum surface hardness is required for your desired application. The standard P20 tool steel is equivalent to DIN 1.2311 plastic mould steel and finds applications in various tools and components. It is employed for die holders, casting dies, zinc die casting, bolsters, backers, injection moulds, pressure casting moulds, shafts and wear strips.

P20 Tool Steel Analysis

The chemical composition below comprises P20 tool steel and the available variations.

	1.2313	1.2311	1.7225	1.2738
Carbon	0.40%	0.35%	0.40%	0.40%
Silicon	0.40%	0.35%	0.35%	0.30%
Manganese	1.50%	1.40%	0.60%	1.50%
Chromium	1.90%	2.00%	1.00%	1.90%
Nickel	0.00%	0.00%	0.00%	1.00%
Molybdenum	0.20%	0.20%	0.20%	0.20%
Sulfur	0.10%	0.00%	0.00%	0.00%

P20 Form of Supply

At Sheffield Gauge Plate, we have fantastic in-house manufacturing facilities. As a result, we can produce any size, shape or length requirement of P20.

P20 Tool Steel is supplied in the below forms:

- Sheet
- Flat
- Plate
- Diameter

In addition to our standard **metric** and **imperial** sizes, we can supply bespoke, non-standard measurements in large and small quantities.

For more information on our sizes, stock availability and lead times, please contact the team at 0114 233 5291.

Stress Relieving P20 Tool Steel

Stress relieving your P20 steel is beneficial to reduce the risk of dimensional changes and minimise residual stress in the material's structure. Heat uniformly to 500 ° C, soak for 2 hours, and air cool.

Hardening P20 Tool Steel

P20 is supplied in a pre-hardened condition, so hardening is not required or essential. However, it can be hardened by heating uniformly to 820 ° C – 840° C and quenching in oil.

Nitriding P20 Tool Steel

P20 can be nitrided to produce hard, abrasion-resistant and corrosion-resistant skin to a depth of 0.35mm to 0.4mm.

Sheffield Gauge Plate has been producing steel at our state-of-the-art facility for over 40+ years; therefore, we guarantee quality with all tool steel and gauge plate orders. Our expertise, knowledge and experience will deliver your order on time, at the correct size and weight.

Order by phone: 0114 233 5291
Order by email: sales@sgpltd.co.uk