

Typical Analysis

C	0.28	Si	0.30
Mn	0.95	Cr	14.20
Mo	1.10	Ni	0.50

Colour Code



Characteristics

These mould steels have a very high resistance to corrosion and are particularly useful for processing chemically aggressive and acid precipitating materials such as PVC. These steels will take a good polish, can be textured and are amenable to Nitriding.

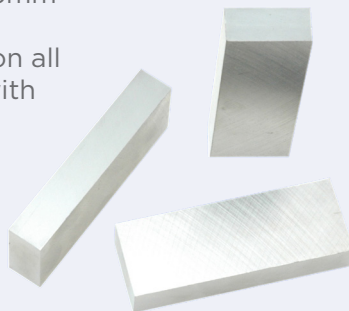
Rolled or forged flat material is supplied to a slightly modified specification (Carrs PM09 - 1.2316MOD) which improves machinability and corrosion resistance over standard 1.2316. Diameter bar is supplied to the standard specification (Carrs P1009-1.2316)

Stock

CARRS P1009 is available in flats and diameters, please enquire for current delivery times.

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Rectangular sections from 25mm³ up to 430 X 430 X 150mm can be delivered fine milled on all six faces to - 0+0.1mm and with squareness guaranteed to 0.1mm/m.



Typical Applications

Uses include moulds for environmental and waste water engineering, spraying heads and extrusion mould tools, barrel extruders and construction material for corrosion resistant tooling. Although this steel may be used at temperatures up to 600°C, it is important to note that temperatures in excess of 160°C can promote the production of highly corrosive breakdown products from polymers such as PVC and this temperature should not be exceeded when processing such material.

Physical Properties

P1009 is delivered in the hardened and tempered condition in the hardness range 265-310HB (28-33HRC) in which condition it is readily machinable. Following machining, tools may be put straight into use. Where greater hardness is required, P1009 should be annealed prior to, and hardened after machining.

HEAT TREATMENT

Annealing

Soak at 820°C for 6 to 8 hours and cool in still air for a hardness of 230HB.

Hardening & Tempering

Thoroughly warm Tools or Components before charging

Heating & Soaking

Heat slowly to 400, 650, 850 and finally to 1030°C holding at each temperature for 25 minutes per inch of ruling section.

Quenching

Quench in salt at 500°C for 6 minutes per inch of ruling section. Cool in still air to 150°C, equalise, and then temper immediately.

Tempering

Temper according to the chart but note that tempering between 300°C and 600°C will result in a significant reduction in resistance to corrosion. A second temper is recommended.

