

55NiCrMoV7 Tool Steel

55NiCrMoV7 tool steel cut and delivered straight to your tool room, whatever size you need.

55NiCrMoV7 tool steel stockholders and suppliers, delivering to the whole of the UK.

55NiCrMoV7 is a nickel, chromium grade tool and die steel available in diameters. It combines very good high temperature toughness with shock and fatigue strength characteristics. 55NiCrMoV7 has good hardening properties.

Form of Supply

West Yorkshire Steel are stockholders and suppliers of round bar which can be cut to your requirements. Bar can be cut as one offs or multiple cut pieces.

Applications

Typical 55NiCrMoV7 applications include forming dies, punches, hot shear knives, backing plates, bending and embossing tools.



Contact our experienced sales team who will assist you with your enquiry.

- Diameter

DIN Standard steel grades we supply

[45NiCrMo16](#) | [55NiCrMoV7](#) | [90MnCrV8](#)
[42CrMo4](#) | [X45NiCrMo4](#) | [60WCrV8](#) | [31CrMoV9](#)
[X100CrMoV5](#) | [X153CrMoV12](#) | [X210Cr12](#)
[60WCrV7](#) | [X210CrW12](#) | [X40Cr14](#) | [X40CrMoV5-1](#)
[40CrMnMoS8-6](#) | [HS6-5-2C](#) | [40CrMnMo7](#)
[X155CrMoV12-1](#) | [100MnCrW4](#)

Typical Analysis

Carbon	0.50-0.60%	Chromium	0.80-1.20%
Manganese	0.60-0.90%	Molybdenum	0.35-0.55%
Sulphur	0.03% max	Silicon	0.10-0.40%
Phosphorous	0.03% max	Nickel	1.50-1.80%
Vanadium	0.05-0.15%		

Forging

Preheat slowly to 700°C then increase temperature more rapidly to 1050°C. Do not forge below 800°C. It is essential to cool slowly after forging, either in a furnace or in vermiculite.

Annealing

Soak thoroughly at 740-760°C before furnace cooling at a maximum rate of 10°C per hour down to 600°C followed by cooling in air.

Stress Relieving

When tools made from 55NiCrMoV7 steel are heavily machined or ground, the relief of internal strains is advisable before hardening to minimise the possibility of distortion. Stress relieving of this grade should be done after rough machining. To stress relieve, heat the component carefully to 600-650°C, allow a good soaking period, about two hours per 25mm of section. Cool in the furnace to 500°C then freely in air. Tools may then be finish machined before hardening.

Hardening

Pre heat at 650°C followed by rapid increase of temperature to the hardening temperature of 900-950°C. Quench in oil.

Tempering

Pre heat to 600-700°C. Soak thoroughly, then increase rapidly to the hardening temperature of 850-880°C. Air or oil quench. Tools should be tempered as soon as they become hand-warm.

Temperature °C	200	250	300	400	500
Hardness HRc	55	54	53	49	45

Nitriding

55NiCrMoV7 tool steel can be nitrided to give a hard surface case. The steel is then very resistant to wear and erosion. Nitriding also increases the steels resistance to corrosion. Before nitriding the tool should be hardened and tempered at approximately 50°C above the nitriding temperature.

Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times will vary due to factors such as the shape and size of each 55NiCrMoV7 steel component. Other considerations during the heat treatment process include the type of furnace, quenching medium and work piece transfer facilities. Please consult your heat treatment provider for full guidance on heat treatment of 55NiCrMoV7 tool steel.

Quality Assured Supply

55NiCrMoV7 tool steel is supplied in accordance with our ISO 9001:2015 registration.