AISI 4340 Alloy Steel

Quality 4340 alloy steel cut and delivered straight to your workshop.

AISI 4340 alloy steel stockholders and suppliers, delivering to the whole of the UK.

AISI 4340 steel stockholders and suppliers, delivering to the whole of the UK. AISI 4340 is a nickel chromium molybdenum alloy steel specification widely used in the oil and gas sectors. As a quality grade alloy steel it offers toughness and high strength in the heat treated condition, with good fatigue strength. Available in round bar 4340 is available fully certified and suitable for applications requiring a quality high tensile alloy steel. AISI 4340 is commonly supplied quenched and tempered with a hardness of between 24 to 29HRc.

Other AISI oil and gas steel grades we supply:

4130 | 4140 | 4145 | 4330 | 8620 | 6150 |

Form of Supply

West Yorkshire Steel are AISI 4340 steel stockholders and suppliers of round bar. Diameters can be supplied as full bar lengths or cut blanks. AISI 4340 ground steel bar can be supplied, providing a high tensile alloy steel precision ground bar to tight tolerances.

Contact our experienced sales team who will assist you with your AISI 4340enquiry.

- Diameter

Applications
This grade of steel is suited for shock loading or stress concentration applications such as shafts, gears, bolts, nuts, pins and couplings.

Analysis

Carbon	0.38-0.43%	Silicon	0.15-0.35%
Manganese	0.60-0.80%	Chromium	0.70-0.90%
Molybdenum	0.20-0.30%	Nickel	1.65-2.00%
Sulphur	0.025% max.	Phosphorous	0.025% max.

Forging
Preheat the steel carefully, then raise the temperature to 1150-1210°C for forging. Do not forge below 850°C. It has good forging characteristics but care must be taken when cooling as the steel shows susceptibility to cracking. Cooling in ash or lime after forging is recommended.

Annealing
Heat the steel slowly to 800-860°C and allow enough time for the steel to be thoroughly heated. Cool slowly in the furnace.

Stress Relieving
When components are heavily machined, ground or otherwise subject to cold work, stress relieving will be beneficial prior to hardening.

Hardening
4340 steel is usually supplied ready heat treated. If further heat treatment is required annealed 4340 should be heated slowly to 830-865°C and after adequate soaking at this temperature quench in oil. Temper as soon as the steel reaches room temperature.

Tempering
Heat the steel carefully to a suitable temperature selected by reference to a tempering chart or table, soak at the temperature for 2 hours per 25mm of section, then allow to cool in air.

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 4340 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 AISI 4340 steel.

Quality Assured Supply
4340 alloy steel is supplied in accordance with our ISO 9001:2015 registration.

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