

735A51 Spring Steel

735A51 steel suppliers and stockholders delivering throughout the UK. West Yorkshire Steel are leading suppliers of 735A51 chromium vanadium type spring steel round bar. Commonly supplied in the as rolled condition 735A51 is suited for oil hardening and tempering. Hardened 735A51 offers excellent toughness and shock resistance which makes it a suitable alloy spring steel for parts exposed to stress, shock and vibration. When used in the oil hardened and tempered condition this spring steel combines spring characteristics with good wear and abrasion.

We welcome export enquiries for 735A51 chrome vanadium spring steel. Contact our sales office and consult our [shipping policy](#) for further details.

Related Specifications

BS970 735A50 1.8159 AISI 6150 50CrV4 50CV4 ASTM A829

Alternative spring steel grades we supply

[CS70](#) | [CS80](#) | [CS95](#) | [CS100](#) | [EN42](#) | [EN43](#) | [EN45](#) | [EN47](#) | [6150](#) | [301](#)

Form of Supply

West Yorkshire Steel are suppliers of 735A51 spring steel round bar. Diameters in 735A51 can be sawn to required lengths as one offs or multiple cut pieces. Centreless ground 735A51 spring steel bar can be supplied, providing high quality precision ground spring steel bar to tight tolerances.

Contact our experienced sales team who will assist you with your 735A51 spring steel enquiry.

- Diameter
-

Applications

Commonly used in the motor vehicle industry and widely used for numerous general engineering applications. 735A51 is suitable for applications that require high tensile properties combined with toughness. Typical applications include pumps, crankshafts, steering knuckles, gears and spindles.

Analysis

Carbon	0.48-0.54%	Vanadium	0.10%-0.20%
Manganese	0.70-1.00%	Phosphorous	0.035% max
Silicon	0.20-0.35%	Sulphur	0.035% max
Chromium	0.90-1.20%		

Forging

Preheat carefully, then raise temperature to 1050°C for forging. Do not forge below 840°C. After forging slowly cool the steel, preferably in a furnace.

Annealing

Heat the steel slowly to 820-840°C, soak well. Slowly cool in a furnace.

Hardening

Slowly heat the 735A51 to 650-700°C and thoroughly soak. Continue to heat the steel to the final hardening temperature of 830-860°C and allow the component to be heated through. Quench in oil.

Tempering

Temper the steel component immediately after quenching whilst tools are still hand warm. Re-heat to the tempering temperature then soak for one hour per 25 millimetre of total thickness (two hours minimum) Cool in air. For most applications tempering will be between 400-600°C.

Heat Treatment

Heat treatment temperatures, including rate of heating, cooling and soaking times etc.. will vary due to factors such as the shape and size of each 735A51 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.

Welding

We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding 735A51 spring steel.

Certification

735A51 steel is available with cast and analysis certification, please request when placing any orders.

Quality Assured Supply

735A50 spring steel is supplied in accordance with our ISO 9001:2015 registration.