

## EN36 Case Hardening Steel

**EN36 case hardening steel stockholders and suppliers, delivering to the whole of the UK.** EN36 is a 3% nickel, chromium, molybdenum grade. Carburised EN36 gives a hard case with a strong core, whilst retaining a remarkable degree of toughness.

We welcome export enquiries for case hardening steel. Contact our sales office and consult our [shipping policy](#) for details.

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### Form of Supply

West Yorkshire Steel are stockholders and suppliers of EN36 round bar. Diameters in EN36 can be sawn to your required lengths as one offs or multiple cut pieces. Ground steel bar can be supplied, providing a case hardening steel precision ground bar to your close tolerances. We also hold a limited range of stock in EN36C grade round bar.

Contact our experienced sales team who will assist you with your EN36 EN36B case hardening steel enquiry.

- Diameter

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### Applications

As a carburising steel grade it is suitable for roller and ball bearings of extra light section, aeroplane and motor crankshafts requiring hard surfaces for roller paths, connecting rods with case-hardened ends, as well as highly stressed gudgeon pins, gears and certain types of collets.

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### Analysis

Carbon	0.12-0.18%	Chromium	0.60-1.10%
Manganese	0.30-0.60%	Nickel	3.00-3.75%
Silicon	0.10-0.35%	Sulphur	0.050% max
		Phosphorous	0.050% max

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## Carburising / Case Hardening

Case hardening will give a hard wear resisting surface and a tough core strength EN36. Surfaces must be free from dirt and grease, and of low sulphur content. Case hardening can be carried out in salt baths with selected content depending on the type of salt and the depth of penetration required. Other considerations during the heat treatment process include the type of furnace, quenching medium and work piece transfer facilities. Time, temperatures and salt selection will be advised by your heat treatment provider.

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### Typical Mechanical Properties\*

Tensile Strength N/mm <sup>2</sup>	Elongation %	Impact Izod J	Impact KCV J	Hardness HB	Reduction of Area %
1100	15	40	35	341	50

(\*blank case hardened - 19mm test piece)

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### Softening

If it is necessary to soften the EN36 for machining between the carburising and subsequent heat treatment stages, heat to 640-650°C. Soak at this temperature for 1 to 2 hours and cool slowly in the furnace or in air.

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### 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 EN36 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 EN36 case hardening steel.

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### Certification

EN36 case hardening steel is available with BS EN 10204 3.1 mill certificate, please request when placing any orders.