

## EN39 Case Hardening Steel

**EN39 EN39B case hardening steel suppliers, delivering throughout the UK.** EN39 is a 4.5% nickel, chromium, molybdenum grade, suitable for case hardening to give a case resistant surface with a high core strength up to 1310 N/mm<sup>2</sup>. This grade is commonly supplied as round bar. EN39A and EN39B are common standards for this grade.

We welcome export enquiries for EN39 EN39B case hardening steel. Contact our sales office and consult our [shipping policy](#) for details.

### Alternative grades we supply

[EN16T](#) | [EN19T](#) | [EN24T](#) | [EN26W](#) | [EN30B](#) | [EN31](#) | [EN32](#) | [EN36](#) | [EN40B](#) | [EN41B](#) |

### Form of Supply

West Yorkshire Steel are stockholders and suppliers of EN39 round bar. Diameters in grade EN39 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 tight tolerances.

Contact our experienced sales team who will assist you with your EN39 case hardening steel enquiry.

- Diameter

### Applications

As a carburising steel with high core strength it is suitable for heavy duty applications such as roller bearings, shafts and clutch plates.

### Analysis

Carbon	0.12-0.18%	Nickel	3.90-4.30%
Manganese	0.25-0.50%	Molybdenum	0.15-0.30%
Silicon	0.10-0.35%	Sulphur	0.040% max
		Phosphorous	0.035% max

## Carburising / Case Hardening

Case hardening of EN39 will give a hard wear resistant surface and a tough core strength to the steel. 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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## 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 EN39 component. Other considerations during the heat treatment process include the type of furnace, quenching medium and the work piece transfer facilities. Please consult your heat treatment provider for full guidance on heat treatment of EN39 steel.

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## Certification

EN39 case hardening steel is available with BS EN 10204 3.1 mill certificate, please request when placing any orders.