

## 655M13 Case Hardening Steel

**655M13 case hardening steel suppliers and stockholders, delivering to the whole of the UK.** West Yorkshire Steel are suppliers of 655M13 in round bar. Diameters can be supplied as full lengths or cut pieces. It is a 3% nickel, chromium, molybdenum case hardening steel grade. After carburising 655M13 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.

### Alternative grades we supply

[605M36T](#) | [709M40T](#) | [708M40T](#) | [817M40T](#) | [826M40W](#) | [835M30](#) | [535A99](#) | [722M24](#) | [905M39](#) |

### Form of Supply

West Yorkshire Steel are stockholders and suppliers of 655M13 round bar. Diameters in 655M13 can be sawn to your required lengths as one offs or multiple cut pieces on our automated bandsaw machines. 655M13 centreless ground steel bar can be supplied, providing a case hardening steel precision ground bar to your required tolerances.

Contact our experienced sales team who will assist you with your 655M13 case hardening steel enquiry.

- Diameter

### Applications

655M13 is a carburising steel grade 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.

### Analysis

|           |            |             |            |
|-----------|------------|-------------|------------|
| Carbon    | 0.10-0.16% | Nickel      | 3.00-3.75% |
| Manganese | 0.35-0.60% | Chromium    | 0.70-1.00% |
| Silicon   | 0.10-0.35% | Sulphur     | 0.040% max |
|           |            | Phosphorous | 0.035% max |

## Carburising / Case Hardening

Carburising and case hardening will give a hard wear resisting surface and a tough core strength to 655M13. Ensure that surfaces are 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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## Softening

If it is necessary to soften the 655M13 for machining between the carburising and subsequent heat treatment stages, heat to 640-650°C. Soak at this temperature for one to two 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 655M13 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 655M13 case hardening steel.

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## Certification

655M13 case hardening steel is available with BS EN 10204 3.1 mill certificate, please request when placing any orders.