



080M50

080M50 plate, round and flat bar

080M50 steel stockholders and suppliers, delivering throughout the UK.

West Yorkshire Steel are suppliers 080M50 in round and flat bar. We also supply 080M50 as flame cut profiles which can be cut to your required sizes and normalised. 080M50 flame cut steel profiles can be supplied surface ground or precision ground. 080M50 is a similar specification to 080M40 but with a slightly higher carbon content, providing better mechanical properties and heat treatment capabilities. As a medium carbon steel grade with a reasonable tensile strength it is commonly supplied in the cold drawn or as rolled condition. It is suited for use in applications where better properties than a lower carbon mild steel are required, but the costs of an alloy steel are not justified. 080M50 is capable of being flame or induction hardened to produce a good surface hardness with moderate wear resistance.

Alternative carbon steel grades we supply

[070M20](#) | [070M55](#) | [080A15](#) | [S275](#) | [S355](#) | [Key Steel](#) |

Form of Supply

As steel stockholders and suppliers of 080M50 West Yorkshire Steel can offer round, square, hexagon and flat bar. 080M50 bar can be bandsaw cut to your required length as one offs or multiple cut pieces. Flame cut steel profiles can be supplied in this grade, profiles can be surface ground if required. 080M50 ground steel bar can be supplied, providing a precision ground steel bar to tight tolerances



- Flat
- Diameter
- Plate

Contact our experienced sales team who will assist you with your 080M50 enquiry.

Applications

080M50 is used commonly for many general engineering applications. Typical applications include, wood working drills, hammers, shafts, axes, knives, bushes, crankshafts, screws and sickles.

Analysis

| | | | |
|-------------|------------|---------|------------|
| Carbon | 0.45-0.55% | Silicon | 0.10-0.40% |
| Manganese | 0.60-1.00% | Sulphur | 0.05% max |
| Phosphorous | 0.05% max | | |

Flame Cut Profiles

West Yorkshire Steel are suppliers of 080M50 flame cut steel profiles. A hard edge can occur when flame cutting 080M50 plate, therefore this grade is commonly normalised after flame cutting. 080M50 flame cut profiles can be supplied Lumsden ground or precision ground.

Ground Flat Stock

Precision ground flat stock / gauge plate can be produced using 080M50 steel. Subject to size suitability and availability of raw material pieces can be produced in approximately 2 to 3 weeks. Standard and non-standard sizes are available.

Forging

Preheat the steel carefully, then raise temperature to 1100°C for forging. Do not forge below 850°C. After forging cool slowly, preferably in a furnace.

Annealing

Heat slowly to 680-720°C, soak well. Cool slowly in the furnace.

Hardening

Heat the component slowly to 820-870°C and allow it to be heated through. Quench in oil or water.

Tempering

Temper immediately after quenching whilst tools are hand warm. Heat to the tempering temperature then soak for one hour per 25 millimetre of total thickness (2 hours minimum) Cool in air.

Welding

We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding 080M50 steel

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 080M50 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 080M50 carbon steel.

Certification

080M50 steel is available with a cast and analysis certificate or certificate of conformity, please request when placing any orders.

Quality Assured Supply

080M50 steel is supplied in accordance with our ISO 9001:2015 registration.



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