

080M40 Carbon Steel

080M40 steel suppliers and stockholders delivering to the whole of the UK. 080M40 is available from stock in round and flat bar and can be cut to your requirements. Bar is commonly supplied in the cold drawn or as rolled condition. We also offer 080M40 as flame cut steel plates which can be cut to your required sizes and normalised. Flame cut plates can be supplied surface ground or precision ground. This is a medium carbon steel grade with a reasonable tensile strength. As an unalloyed medium carbon steel the tensile properties can vary but are usually between 500-800 N/mm². 080M40 is suited for use in applications where better properties than mild steel are required, but the costs of an alloy steel are not justified. It can be flame or induction hardened to produce a good surface hardness with moderate wear resistance.

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

Alternative carbon steel grades we supply

[EN3](#) | [EN8](#) | [EN9](#) | [EN32](#) | [EN43](#) | [070M20](#) | [070M55](#) | [080A15](#) | [S275](#) | [S355](#) | [Key Steel](#)

Form of Supply

West Yorkshire Steel are steel stockholders and suppliers of this medium carbon steel grade in round bar and flat bar. Diameters can be sawn cut to your required length. Steel profiles can be supplied, which can be surface ground if required. Centreless ground bar can be supplied, offering a precision ground steel bar to tight tolerances.

Contact our experienced sales team who will assist you with your 080M40 carbon steel enquiry.

- Plate
- Flat
- Diameter

Applications

080M40 is widely used for many general engineering applications. Typical applications for this carbon steel grade include shafts, studs, bolts, screws, rollers and connecting rods.

Analysis

Carbon	0.36-0.44%	Phosphorous	0.05% max
Manganese	0.60-1.00%	Sulphur	0.05% max
Silicon	0.10-0.40%		

Flame Cut Profiles

080M40 steel profiles are available flame cut from plate. When profiling a hard edge can occur, therefore this it is commonly normalised after flame cutting. Profile cut steel plates can be supplied Lumsden ground or precision ground.

Ground Flat Stock

Precision ground flat stock / gauge plate can be produced using 080M40 carbon 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 can be manufactured.

Forging

Preheat carefully, then raise the temperature to 1050°C for forging. Do not forge below 850°C. After forging cool slowly, preferably in a furnace.

Annealing

Heat slowly to 680-710°C, soak well. Cool slowly in the furnace.

Hardening

Heat the component slowly to 820-860°C and allow it to be heated through. Quench in oil or water.

Tempering

Temper the steel 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 550-660°C.

Welding

We recommend you contact your welding consumables supplier who should provide you full assistance and information on welding this medium carbon 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 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 carbon steel.

Certification

080M40 carbon steel is available with a cast and analysis certificate or a BS EN 10204 3.1 mill certificate, please request when placing any orders.

Quality Assured Supply

080M40 is supplied in accordance with our ISO 9001:2015 registration.