



## 080M46

080M46 plate, round and flat bar

### 080M46 steel stockholders and suppliers, delivering throughout the UK.

West Yorkshire Steel are suppliers of round and flat bar, cold drawn or as rolled. Flame cut profiles are available cut to your required sizes and commonly normalised. Profiles can also be Lumsden or precision ground. This is an unalloyed carbon steel specifications suitable for flame or induction hardening.

### Alternative carbon steel grades we supply

[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.



- Flat
- Diameter
- Plate

Contact our experienced sales team who will assist you with your 080M46 enquiry.

## Applications

080M46 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	0.42-0.50%	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 080M46 flame cut steel profiles. A hard edge can occur when flame cutting 080M46 plate, therefore this grade is commonly normalised after flame cutting. 080M46 flame cut profiles can be supplied Lumsden ground or precision ground.

## Ground Flat Stock

Precision ground flat stock / gauge plate can be produced using 080M46 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 1050°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 080M46 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 080M46 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 080M46 carbon steel.

## Certification

080M46 steel is available with a cast and analysis certificate or certificate of conformity, please request when placing any orders.

## Quality Assured Supply

080M46 steel is supplied in accordance with our ISO 9001:2015 registration.



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