

709M40

Quality 709M40 cut and delivered in rounds or flats, whatever size you need.

709M40T steel stockholders and suppliers, delivering to the whole of the UK.

West Yorkshire Steel are suppliers of bright drawn bar and hot rolled black bar. A similar grade of steel to [708M40](#) but with a variation in the molybdenum content and usually supplied heat treated to 'T' condition. This grade offers good ductility and shock resisting properties combined with resistance to wear. At low temperatures it has reasonably good impact properties. 709M40T is a popular high tensile engineering steel with a tensile of 850-1000 N/mm². This grade can be nitrided and flame or induction hardened which will give the steel maximum wear and abrasion resistance characteristics.

Alternative [alloy steel](#) grades we supply

[605M36](#) | [708M40](#) | [817M40](#) | [826M40](#) | [835M30](#)
[535A99](#) | [080A15](#) | [655M13](#) | [722M24](#) | [905M39](#)

Form of Supply

West Yorkshire Steel are stockholders and suppliers of 709M40T round bar and flat section bandsaw cut. Diameters in 709M40T can be sawn to your required lengths as one offs or multiple cut pieces. 709M40T ground steel bar can be supplied, providing a high tensile steel precision ground bar to tight tolerances.



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

- Flat
- Plate
- Diameter

Applications

Commonly used for general engineering applications 709M40T is suitable for applications such as high tensile shafts, bolts and nuts, gears, pinions spindles and the like.

Analysis

Carbon	0.36-0.44%	Silicon	0.10-0.35%
Manganese	0.70-1.00%	Chromium	0.90-1.20%
Molybdenum	0.20-0.40%	Phosphorous	0.035% max
Sulphur	0.05% max		

Forging

Pre heat carefully, then raise temperature to 850-1200°C for forging. Do not forge below 850°C. After forging cool slowly in still air.

Annealing

Heat the 709M40T slowly to 680-700°C. Cool in air.

Hardening

This steel grade is commonly supplied ready heat treated. If further heat treatment is required annealed 709M40 should be heated slowly to 860-890°C and after adequate soaking at this temperature quench in oil. Temper as soon as tools reach room temperature.

Tempering

Heat carefully to a suitable temperature selected by reference to a tempering chart or table. Soak at the temperature for 2 hours per 25mm of ruling section, then allow to cool in air. Tempering between 250-375°C is not advised as tempering within this range will reduce the impact value.

Typical Mechanical Properties*

Condition	Tensile N/mm ²	Yield N/mm ²	Elongation %	Izod KCV J	Hardness Brinell
S	777-925	555	13	22	223-277
T	850-1000	650	13	35	248-302
U	925-1075	755	12	42	269-331

(subject to ruling section*)

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 709M40T alloy steel.

Certification

709M40T alloy steel is available with cast and analysis certificate or a BS EN 10204 3.1 mill certificate, please request when placing any orders.

Quality Assured Supply

709M40T is supplied in accordance with our ISO 9001:2015 registration.



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