

722M24 Nitriding Steel

722M24 steel suppliers and stockholders, delivering to the whole of the UK. West Yorkshire Steel are suppliers of round bar and flat bar. 722M24 is a chromium molybdenum nitriding steel grade usually supplied in the hardened and tempered 'T' condition, which offers high wear resistance together with good toughness and ductility. In 'T' condition it has a tensile strength of 850-1000 N/mm². Characterised by its suitability for nitriding, which can give the steel a hard wear resistant case in the range of 61-65Rc. The relatively low temperature of the nitriding process produces components with a scale free surface, with minimum distortion during the heat treatment process. 722M24 may be used in its supply condition (usually 'T') for applications and components which require a high tensile steel strength and high creep strength at temperatures up to 600°C.

We welcome export enquiries for 722M24 steel. Contact our sales office and consult our [shipping policy](#) for further details.

Alternative grades we supply

[605M36T](#) | [709M40T](#) | [708M40T](#) | [817M40T](#) | [826M40W](#) | [835M30](#) | [535A99](#) | [655M13](#) | [905M39](#)

Form of Supply

West Yorkshire Steel are suppliers and stockholders of round bar and some flat bar sizes. Diameters and flats can be sawn to your required lengths as one offs or multiple cut pieces. Centreless ground 722M24 or 722M24T steel bar can be supplied, providing a high tensile nitriding steel precision ground bar to tight tolerances.

Contact our experienced sales team who will assist you with your 722M24 alloy nitriding steel enquiry.

- Flat
 - Diameter
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Applications

Suitable for applications that require excellent resistance to wear and abrasion combined with high fatigue strength. Typical applications for 722M24 include shafts, extruders, gear wheels, drills, guides, pins, spindles and bolts. Widely used in the automotive, textile and general engineering industries.

Analysis

Carbon	0.20-0.28%	Chromium	3.00-3.50%
Manganese	0.45-0.70%	Molybdenum	0.45-0.65%
Silicon	0.10-0.40%	Sulphur	0.040% max
		Phosphorous	0.035% max

Forging

Preheat the steel carefully, then raise the temperature to 850-1200°C for forging. Do not forge below 850°C. After forging 722M24 alloy steel, cool slowly in still air.

Annealing

Heat the 722M24 slowly to 680-700°C. Cool in air.

Hardening

722M24T is supplied ready heat treated. If further heat treatment is required annealed 722M24 should be heated slowly to 880-910°C and after adequate soaking at this temperature quench in oil/polymer or water. Temper as soon as tools reach room temperature.

Tempering

Carefully heat to a suitable temperature selected by reference to a tempering chart or table (usually between 570-700°C), soak at the temperature for two hours per 25mm of ruling section, then allow to cool in the air.

Typical Mechanical Properties*

Condition	Tensile N/mm ²	Yield N/mm ²	Elongation %	Izod KCV J	Hardness Brinell
S	775-925	525	14	16	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 722M24 alloy steel.

Certification

722M24 alloy 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

722M24 is supplied in accordance with our ISO 9001:2015 registration.