

722M24 (EN40B)

HIGH TENSILE LOW ALLOY STEEL

We are a division of the Smiths Metal Centres Limited Group

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722M24 is a low-alloy steel that contains chromium and molybdenum as its primary alloying elements.

It is a high-tensile steel with good strength, toughness, and wear resistance properties. This type of steel is commonly used in applications that require high strength and good resistance to wear and fatigue. It is often used to manufacture aerospace, oil and gas, and automotive components.

Chemical Composition (weight, %)

	C	Si	Mn	P	S	Cr	Mo
Min.	0.20	0.10	0.45			3.00	0.45
Max.	0.28	0.40	0.70	0.035	0.040	3.50	0.65

* Properties as per BS 970

Weldability:

When considering welding **722M24**, precautions must be taken to ensure that the welding process does not affect the material properties or cause cracking. Due to its high carbon content, preheating the material is recommended before welding to avoid cracking. Post-weld heat treatment is also necessary to relieve residual stresses and improve the toughness of the weld. **722M24** steel is a weldable material, which makes it easy to manufacture components with complex shapes.

Toughness:

This steel has good toughness, which means it can withstand impacts and sudden shocks without fracturing or breaking. The toughness of this steel is primarily due to its microstructure, which consists of fine-grained ferrite and pearlite. The presence of chromium and molybdenum in **722M24** steel also contributes to its toughness by improving its hardenability and resistance to wear and corrosion.

Benefits:

- Good toughness
- Good tensile strength
- Good wear and fatigue resistance
- Highly weldable

Heat-treatment:

The material can be heat treated to improve its mechanical properties, strength, and toughness, making it an ideal material for high-stress applications. Heat treatment typically involves three stages: annealing, normalising, and hardening and tempering.

Applications include mining- rock drills and crushers, turbines, generators, gears, shafts and drilling equipment.

Availability:

We stock **722M24** in round and square bars.

