817M40T (EN24T)

CHROMIUM MOLYBDENUM ENGINEERING STEEL

817M40T (EN24) is a chromium molybdenum engineering steel which is ideal for use in the production of high-strength components.

M40 denotes the tensile strength of the alloy, which is around 40 tonnes per square inch. The 'T' indicates that the material has undergone heat treatment to achieve the desired mechanical properties.

Chemical Composition (weight, %)

	C	Si	Mn	P	S	Cr	Mo	Ni
Min.	0.36	0.10	0.45			1.00	0.20	1.30
Max.	0.44	0.40	0.70	0.035	0.040	1.40	0.35	1.70

* Properties as per BS 970

Suitability:

817M40T suits engineering applications requiring high tensile and yield strength, high toughness, good ductility and excellent wear resistance. Further heat treatment achieves various hardness levels. While the steel promotes some corrosion resistance, it is not considered suitable for use in corrosive environments.

Machining:

Machining **817M40T** is challenging but possible with sharp cutting tools (carbide or high-speed steel) combined with an adequate coolant. The product should be cut at slow, consistent speeds to avoid overheating. Preheating is also an option, as it reduces the alloy's toughness making machining easier. The alloy is versatile and straightforward to form and weld, making it useful for various engineering applications.

Wear Resistance:

The alloy offers excellent wear resistance, which may be improved further by additional treatments such as CVD and PVD coating, nitriding and shot peening. Such high wear resistance makes the steel highly suitable for gear, shaft and bearing applications.

Applications:

We recommend the alloy for use in applications including:

- General tooling, cutting tools and dies
- Bearings, bushes, spindles and gears
- Shafts and axles
- Aircraft landing gear and structures

We stock **817M40T** in round and square bars, which we supply in standard and cut lengths.

1 Wharf Approach
Anchor Brook Industrial Estate
Aldridge, Walsall, WS9 8BX

Tel: **01922 666 310**

SCAN ME

info@**tsmsteel**.com

www.**tsmsteel**.com