



# 605M36 (EN16)

HIGH TENSILE STEEL ALLOY

We are a division of the Smiths Metal Centres Limited Group

Revision: tsm/heat-treated/605m36/14-03-23

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**605M36** is a type of high-tensile steel commonly used in applications requiring high strength and toughness.

This steel grade has a relatively low carbon content, which provides good weldability. It is a British Standard alloy steel that contains elements such as chromium, molybdenum, and nickel to enhance its mechanical properties. Alloy equivalents include EN16 and SAE 4135.

### Chemical Composition (weight, %)

	C	Si	Mn	Mo	P	S
Min.	0.32	0.10	1.30	0.22		
Max.	0.40	0.40	1.70	0.32	0.035	0.040

\* Properties as per BS 970

### Characteristics:

Positive characteristics of **605M36** steel include high tensile strength, good ductility, excellent toughness, and resistance to wear and fatigue. It is often used to manufacture components for heavy-duty machineries, such as axles, gears, and shafts.

### Strength:

**605M36** steel has a high tensile strength, depending on the heat treatment condition and the diameter of the material. In the normalised and tempered condition (i.e., heat-treated to a hardness of around 230 to 280 Brinell and then tempered), this steel grade typically has a tensile strength of 850 to 1000 MPa (megapascals).

In the hardened and tempered condition (i.e., heat-treated to a hardness of around 300 to 350 Brinell and then tempered), the tensile strength can be increased to 1000 to 1200 MPa (145,000 to 174,000 psi).

### Benefits:

- High tensile strength
- Good ductility
- Excellent toughness
- Readily machinable

### Machining:

The alloy is readily machinable in the supply condition thanks to its good ductility. It is an alternative product to other chromium and nickel-chromium high-tensile steel specifications.

### Availability:

We stock **605M36** in round and square bars of various diameters. We supply the product in standard lengths or cut to your specific size requirements.



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