

# 070M55 (EN9)

MEDIUM CARBON ENGINEERING STEEL

We are a division of the Smiths Metal Centres Limited Group

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**070M55** is a medium-carbon steel that contains approximately 0.55% carbon and small amounts of other elements such as manganese, silicon, & sulphur.

It is also sometimes referred to as EN9 steel, a British standard designation for this type of steel. **070M55** steel offers a balance of strength, toughness, and wear resistance, making it a popular choice for various automotive, engineering, and construction applications.

### Chemical Composition (weight, %)

	C	Si	Mn	P	S
Min.	0.50	0.10	0.50		
Max.	0.60	0.40	0.90	0.05	0.05

\* Properties as per BS 970

### Machinability:

**070M55** steel contains small amounts of other elements, such as manganese and silicon, which help to improve its machinability. The steel can be readily heat-treated to further enhance its machinability, particularly in annealed or normalised conditions.

### Strength:

As a medium carbon steel, **070M55** has a good balance of strength and toughness. The exact strength of the steel will depend on the heat treatment condition and the specific mechanical properties required for the intended application. In its normalised condition, **070M55** typically has a tensile strength of around 700-850 MPa (101-123 ksi) and yield strength of about 450-650 MPa (65-94 ksi). Heat treatment processes such as quenching and tempering can further improve these values.

### Availability:

We stock **070M55** steel in round and square bars.

### Benefits:

- High tensile strength
- Relatively easy to machine
- High wear resistance
- High surface hardness

### Cost Effectiveness:

**070M55** steel is relatively inexpensive compared to other high-strength steel alloys, making it a cost-effective choice for applications requiring high strength and wear resistance.

### Impact Resistance:

In general, the steel offers good impact resistance due to its high strength and toughness. Still, it is essential to select the appropriate heat treatment condition and mechanical properties based on the specific application requirements to ensure optimal performance and safety.