

070M20 (EN3A)

LOW CARBON ENGINEERING STEEL

We are a division of the Smiths Metal Centres Limited Group

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070M20 (EN3A) is a low carbon, well-balanced unalloyed engineering steel suited where heavy stresses and heat treatment are not applied.

It is a bright drawn and turned mild steel offering excellent machinability. The “M” in the designation indicates that the steel has been fully killed (i.e., all oxygen has been removed from the steel), and the “20” refers to the carbon content, which is approximately 0.20%.

Chemical Composition (weight, %)

	C	Si	Mn	P	S
Min.	0.16	0.10	0.50		
Max.	0.24	0.40	0.90	0.05	0.05

* Properties as per BS 970

Weldability:

The material has excellent weldability characteristics and can be efficiently welded using various welding techniques, making it a versatile option for many applications. The low carbon content and the absence of alloying elements in the steel make it more responsive to welding. It can be welded using both manual and automatic welding processes.

Ductility:

The steel exhibits good ductility and toughness, and is less likely to fracture or fail under stress. With Brinell hardness of 119–235 and tensile strength of 410-790 MPa.

Machinability:

070M20 steel can be easily machined due to its low carbon content, making it an ideal choice for manufacturing complex components.

Applications:

070M20 steel is often used to manufacture gears, shafts, studs, bolts, and other components where low strength and good machinability are required. It can be readily welded, formed, and machined and is known for its good ductility and toughness. Its relatively low cost makes it a popular choice for many engineering applications.

Benefits:

- Superior machinability
- Can be case hardened
- High ductility
- Suitable for welding

Also referred to as EN3A, EN3B or BS 970 080M20, this steel provides low strength, withstanding a moderate amount of cold deformation with suitability for welding.

We stock **070M20** in round and square bars.

