

Aerospace Steel Bar

Product Description

BS S97 aerospace steel bar is an alloy which offers a combination of high tensile strength and toughness. The alloy also offers good creep resistance. Classed as a structural steel alloy, S97 finds many uses in industry due to the materials ability to perform well in elevated temperature atmospheres. From aerospace to oil & gas, S97 is supplied in the annealed condition as bright bar and is usually subjected to ultrasonic inspection before supply. The mechanical properties of alloy structural steel are preferable when compared with carbon structural steel.

Availability

Bar

Typical Applications

- Structural aerospace applications
- Turbine fasteners
- Pressure vessels
- Gears and shafts
- Boiler support rods
- Machine tools

Key Features

- Good combination of high tensile strength and toughness
- Widely used in elevated temperature service
- Supplied in the annealed or bright annealed condition
- Good creep resistance
- Better mechanical properties than carbon structural steel

Chemical Composition (weight %)

Weight (%)	C	Si	Mn	P	S	Cr	Mo	Ni	Al
Min	0.27	0.15	0.45			0.50	0.45	2.3	0.015
Max	0.35	0.35	0.70	0.025	0.015	0.80	0.65	2.8	0.050

Mechanical Properties

Tensile Strength	1000 to 1160 MPa
Yield Strength	853 MPa max
Elongation (%)	7 - 12 % min
Hardness (Brinell)	293 - 341 HB
Hardness (Vickers)	310 - 360 HV
Charpy V-Notch (room temperature)	47.5 J min
Hardness of softened material	277 HB max

Technical Assistance

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

UK Service Centres:

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Quality & Testing:



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