

### Aerospace Steel Bar

#### Product Description

BS S106 aerospace steel bar is a 3% chrome-molybdenum nitriding steel which develops high hardness after heat treatment. It is generally supplied as bright bar in the hardened, tempered and stress relieved condition. The alloy offers excellent wear and abrasion resistance combined with high fatigue strength. It can be used in elevated temperature applications. Classed as a nitriding steel, BS S106 is used in applications including the aerospace and motorsport sectors.

#### Typical Applications

- Aerospace components
- Motorsport components
- Automotive components
- Shafts and spindles
- Gear wheels
- Extruders

#### Availability

Bar

#### Key Features

- Nitriding steel
- 3% chrome molybdenum content
- Supplied as bright bar in the hardened, tempered and stress relieved condition
- Excellent wear and abrasion resistance
- High fatigue strength

#### Chemical Composition (weight %)

Weight (%)	C	Si	Mn	P	S	Cr	Mo	Ni	Sn
Min	0.20	0.10	0.40			3.0	0.50		
Max	0.28	0.35	0.70	0.020	0.020	3.5	0.70	≤ 0.30	0.030

#### Mechanical Properties

Tensile strength MPa:	930 - 1080 MPa
0.2% Proof Stress MPa:	740 min
Elongation (%):	13
120D:	35 ft/lb min
Hardness in heat treated condition:	269 - 321 HB
	285 - 340 HV
Hardness in soft condition:	269 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:

Smiths Belfast **02895 908 897**  
 Smiths Biggleswade **01767 604 704**  
 Smiths Birmingham **0121 728 4940**  
 Smiths Bristol **0117 971 2800**  
 Smiths Chelmsford **01245 466 664**  
 Smiths Gateshead **0191 469 5428**  
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 Smiths Redruth **01209 315 512**  
 Smiths Verwood **01202 824 347**  
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#### Quality & Testing:



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