S156

Smiths Advanced Metals

Wear Resistant Steel Bar

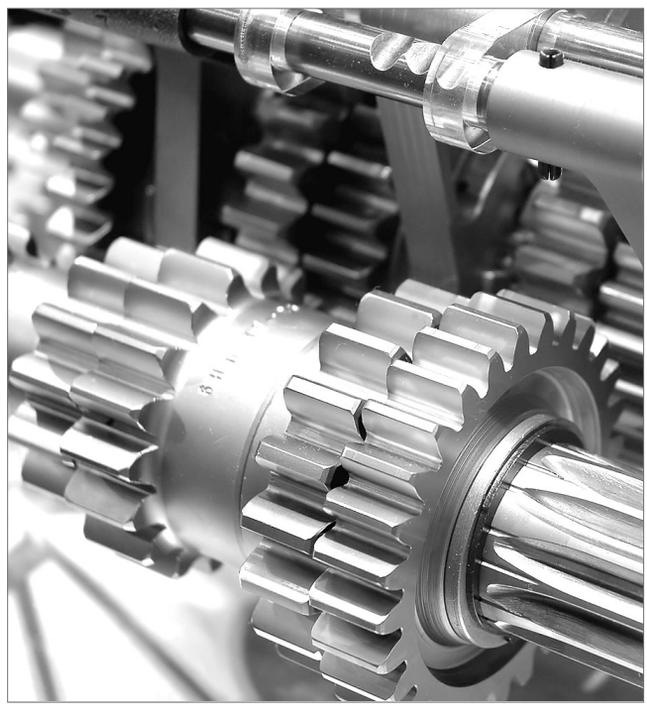
High strength case hardening Steel.

S156 is a high strength aerospace steel grade that offers hard wear resistance after surface treatment.

The strength of the alloy is 1,320 - 1,520 MPa and is manufactured by the process of VAR (vacuum arc remelting), which is a typical process for speciality steel grades). Both bars and forgings should be ultrasonically tested if possible and receive final heat treatment, which entails carburising, hardening and tempering.

The surface hardness of the alloy, after receiving carburising, quenching, sub-zero treatment and tempering processes, will be around 730HV. The resulting product finds use in applications such as highly stressed aircraft parts, motorsport components and helicopter gears.

We stock S156 steel bars in a wide range of incremental sizes and conditions (including normalised and softened conditions).



Grades / Specifications

- 1.6722
- 16NCD17
- BS S100
- BS S82
- MSRR 6010

Benefits

- High strength
- Good mechanical properties
- Good hardenability

*Chemical Composition (weight %)

	C	Si	Mn	P	S	Cr	Mo	Ni
min.	0.14	0.10	0.25			1.00	0.20	3.80
max.	0.18	0.35	0.55	0.015	0.012	1.40	0.30	4.30

* As per BS S156

*Mechanical Properties	Minimum	Maximum
Ultimate Tensile Strength	1,320 MPa	1,520 MPa
0.2% Proof Stress	1,030 MPa	
Elongation	11%	
Reduction of area	40%	
Izod impact, ft lbf	30	
Hardness		277 HBW

* Properties as per BS S156

Unit 5 Percy Road,
Huntingdon,
Cambridgeshire PE29 6SZ
Tel: +44 (0) 1767 604710

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UKAS TESTING 1930

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