

# S156

Smiths Advanced Metals

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## 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

[www.smithsadvanced.com](http://www.smithsadvanced.com)

[info@smithsadvanced.com](mailto:info@smithsadvanced.com)



Stratton Business Park,  
London Road, Biggleswade,  
Bedfordshire SG18 8QB

Tel: +44 (0) 1767 604710

