BS S156 Steel

Smiths High Performance

Case Hardening Steel

BS S156 alloy steel also referred to as nitriding steel, is the VAR version of S82.

Typically, we supply the alloy in the normalised and softened delivery condition.

After surface treatment, the material offers a hard and durable wear-resistant surface making the product ideal for high-performance gearboxes in the motorsport sector. **BS S156** offers high tensile strength ranging from 1,320 to 1,520 MPa. The alloy should be supplied in the heat-treated condition for fabricated parts, which involves carburising, hardening, and tempering.

The material is manufactured by consumable electrode vacuum arc remelting (VAR) and is a 4% Ni-Cr-Mo case-hardening steel.

*Chemical Composition (weight %)

	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
Min.	0.14	0.10	0.25			1.00	0.20	3.80	Bal
Max.	0.18	0.35	0.55	0.015	0.012	1.40	0.30	4.30	Bal

* Properties as per BS S156

*Mechanical Properties (typical)

Property	Minimum	Maximum
UTS, MPa	1,320	1,520
0.2% PS, MPa	1,030	
Elongation, %	11	
Reduction of area, %	40	
Izod impact, ft lbf	30	
Hardness, HB (normalised + softened)		277

* Properties as per BS S156

Benefits:

- High tensile strength
- Case hardened
- Wear resistant
- Durable

Motorsport Applications:

- Gears
- Final drive
- Propulsion shafts
- Sockets

SCAN ME

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