

Product Description

S132 in the British Standard Aerospace Series is a 3% Cr-Mo-V nitriding steel offering a tensile strength of 1,320-1,470 MPa (excellent hardenability for high core strength) and develops a hard wear resistant case after surface treatment. The alloy is usually produced by single melting in air followed by electroslag refining (ESR) but is also available as a vacuum arc re-melted version. Bars and, where applicable, forgings are subjected to ultrasonic examination. Bars are usually supplied bright in the softened condition. Final heat treatment consists of hardening at 950°C (oil quench) followed by tempering at not less than 600°C (air cool).

Typical Applications

- Gearbox shafts
- Crankshafts

Material Specifications

- BS S132:1976
- 40CDV12 (related French spec.)
- Wr.N 1.8523 (related German spec.)
- Various MSRR specifications

Availability

- Black bar (S132B)
- Bright bar (S132D)
- Forgings (S132C)
- We stock S132D in a range of bar diameters

Chemical Composition (weight %)

Weight (%)	C	Si	Mn	P	S	Cr	Mo	Ni	Sn	V	Fe
Min	0.35	0.10	0.40			3.0	0.80			0.15	Rem
Max	0.43	0.35	0.70	0.020	0.020	3.5	1.10	0.30	0.030	0.25	Rem

Mechanical Properties

0.2% PS, MPa	UTS, MPa		Elongation (%)	R of A (%)	Izod impact, ft lbf Charpy U-notch, J	Hardness HB	
	Min.	Max.				Min	Max
1130	1320	1470	8	35	20	388	429

The maximum hardness in the softened condition is 277 HB

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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Quality & Testing:



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