Material Grade: **S156 (VAR)**
S82 (Any electric method)

Available Variant(s):

Variant	Intended use	Condition of supply	Typical dimensional tolerance	Typical straightness	Typical clean-up
S156A S82A	Forging stock/ billets for subsequent forging	Softened	EN10060	EN10060	Per agreement
S156B S82B	Black bars for further machining	Normalised and softened	EN10060	EN10060	No less than 4%
S156C S82C	Forgings	Normalised and softened	Per agreement	Per agreement	Per agreement
S156D S82D	Bright bars for further machining	Normalised and softened	BS EN 10278	BS EN 10278	BS EN 10278

Nearest engineering grade: BS970, 835M15

Associated standards:[1] BS S156:1976
BS 5S82: 1976
BS 6S 100: 2010

Melting/refining method(s): Manufactured by an electric process (S82)
VAR (S156)

1. TYPICAL CHEMICAL COMPOSITION

	%	C	Si	Mn	P	S	Cr	Mo	Ni	Cu
S156	**Min**	**0.14**	**0.1**	**0.25**	**0**	**0**	**1.0**	**0.2**	**3.8**	**-**
	Max	**0.18**	**0.35**	**0.55**	**0.015**	**0.012**	**1.4**	**0.3**	**4.3**	**0.3**
S82	**Min**	**0.14**	**0.15**	**0.25**	**0**	**0**	**1.0**	**0.2**	**3.8**	**-**
	Max	**0.18**	**0.4**	**0.55**	**0.025**	**0.02**	**1.4**	**0.3**	**4.3**	**0.3**

Variance between the two grades are highlighted in grey.

2. TYPICAL MECHANICAL PROPERTIES

	Test type				Tensile and hardness test (at room temperature)						Impact test (izod)
					Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness	Room Temp
	Condition	Nominal diameter or thickness	Direction	Unit	*N/mm2*	*N/mm2*	*N/mm2*	*%*	*%*	*HB*	*ft/lbs*
S82 S156	**Softened, with or without normalising (condition of delivered material)**	**-**	**-**	**Min**	-	-	-	-	-	-	-
				Max	-	-	-	-	-	**277**	-
S156	**Heat treated as per spec TEST SAMPLE ONLY**	**-**	**L**	**Min**	-	**1030**	**1320**	**11**	**40**	-	**30**
				Max	-	-	**1520**	-	-	-	-
S82	**Heat treated as per spec TEST SAMPLE ONLY**	**-**	**L**	**Min**	-	**1030**	**1320**	**8**	**35**	-	**25**
				Max	-	-	**1520**	-	-	-	-

[1] *valid at the time of writing.*
Whilst great care and attention has been paid to compose this datasheet but we will not take the responsibility for any errors.