

Reinforcing Steel Bar Specification

Size Range : 8mm To 32mm

Lengths : 6 , 9 , 12 Or 18 Meters (As per Customer requirement)

Packaging : Bundles

Weight of Bundle - 1 or 2 Mt

Diameter of Bundle - 150-300mm (Varies according to the bar diameter)

Straps per Bundle - Minimum 3

Chemical Composition

Standard / Grade	Chemical Composition % Max							
	C	Mn	S	P	Si	Cu	N	Ceq
BS 4449:1997 Gr 460B	0.25	-	0.05	0.05	-	-	0.012	0.51
BS 4449:2005 Gr 500B	0.22	-	0.05	0.05	-	0.80	0.012	0.50
KWS GSO ISO 6935-2/2012 Gr B500BWR	0.22	1.60	0.05	0.05	0.60	-	0.012	0.50

Mechanical Properties

Standard / Grade	Mechanical Properties					Bending Test		Re- Bending Test	
	Yield Strength N/mm ² (min)	Tensile Strength N/mm ² (min)	Elongation % (min)	Total Elongation at Max Force (Agt) % (min)	Gauge Length (mm)	Angle(°Degree)	Bending Mandrel Dia.(mm)	Angle(°Degree)	Rebending Mandrel Dia.(mm)
BS 4449:1997 Gr 460B	460	1.08 _{vs}	14	5	5d	-	-	45°-23°	≤ 16mm - 5d > 16mm - 7d
BS 4449:2005 Gr 500B	500	1.08 _{vs}	-	5	-	-	-	90°-20°	≤ 16mm - 4d > 16mm - 7d
KWS GSO ISO 6935-2/2012 Gr B500BWR	500	1.08 _{vs}	14	5	5d	180°	≤ 16mm - 3d > 16 to 32mm - 6d	90°-20°	≤ 16mm - 5d > 16 to 25mm - 8d > 25mm - 10d

Standard Bar Count (12m Length)

Nominal Diameter in mm	Unit Mass kg/m	Nominal Mass kg/pc	Pieces/Bundle
8	0.395	4.74	422
10	0.617	7.40	270
12	0.888	10.66	188
14	1.210	14.52	138
16	1.580	18.96	106
18	2.000	24.00	84
20	2.470	29.64	68
22	2.980	35.76	56
25	3.850	46.20	44
28	4.830	57.96	34
32	6.310	75.72	26

Permissible Deviation (From Mass & Length)

Standard / Grade	Mass		Length	
	Dia. (mm)	Dev. (%)	in (m)	Dev. (mm)
BS 4449:1997 Gr 460B	8 - 10 >8	± 6.50 ± 4.50	6	+ 40 / - 0
BS 4449:2005 Gr 500B	≤8 >8	± 6.50 ± 4.50	9, 12, 18	+ 40 / - 0
KWS GSO ISO 6935-2/2012 Gr B500BWR	≤8 10 & 12 14 to 22 25 to 32	± 8.00 ± 6.00 ± 5.00 ± 4.00		