

STEEL BAR SPECIFICATIONS

Standard	Grade	C(%) Max	S(%) Max	P(%) Max	N(%) Max	Ceq(%) Max	Yield Strength N/mm ² (min)	Tensile Strength N/mm ² (min)	Min Elongation (Gauge Length L)		Bend Test
									At fracture	At max force	
BS4449:1997 (Hot rolled steel bars)	G250 (Plain round steel bars)	0.25	0.06	0.06	0.012	0.42	250	Actual YS X 1.15	22%	–	Rebend (2d) = 1st Bend 45° 2nd Bend 23°
	G460 A (High yield steel bars)	0.25	0.05	0.05	0.012	0.51	460	Actual YS X 1.05	12%	2.5%	Rebend (5d) = 1st Bend 45° 2nd Bend 23°
	G460 B (High yield steel bars)							Actual YS X 1.08	14%	5%	
MS146:2006 (Hot rolled steel bars)	G250 (Plain round steel bars)	0.25	0.06	0.06	0.012	0.42	250	Actual YS X 1.05	22% (L=5d)	–	Bend Angle (2d) = 180° Rebend (2d) = 1st bend 45° Rebend 23°
	G460 (Deformed bars)	0.25	0.05	0.05	0.012	0.51	460	Actual YS X 1.05	12% (L=5d)	–	Bend Angle (3d) = 180° Rebend (5d) = 1st Bend 45° Rebend 23°
	G500 (Deformed bars)	0.30	0.05	0.05	0.012	0.51	500	Actual YS X 1.05	12% (L=5d)	–	

d= nominal diameter YS= yield strength So= original cost sectional area

Standard	Grade	C(%) Max	S(%) Max	P(%) Max	Cu(%) Max	N(%) Max	Ceq(%) Max	Yield Strength N/mm ² (min)	Tensile Strength N/mm ² (min)	Elong After Fracture (min)	Elong At Max Force (min)	Bend Test
AS/ NZS4671:2001 (Steel reinforcing steel)	R250N (Plain round bars)	0.22	0.05	0.05	–	–	0.43	250	Actual YS X 1.08	–	2.5%	≤16mm(4D) - 1st Bend 90° - 2nd Bend 90° ≥20mm(4D) - Bending 180°
	D500N (Deformed ribbed bars)	0.22	0.05	0.05	–	–	0.44	500-650	Actual YS X 1.08	–	5%	≤16mm(4D) - 1st Bend 90° - 2nd Bend 90° ≥20mm(4D) - Bending 180°

STEEL BAR SPECIFICATIONS (CONT'D)

Standard	Grade	C(%) Max	S(%) Max	P(%) Max	Cu(%) Max	N(%) Max	Ceq(%) Max	Yield Strength N/mm ² (min)	Tensile Strength N/mm ² (min)	Elong After Fracture (min)	Elong At Max Force (min)	Bend Test
MS146:2014 BS4449:2005+ A2:2009 (Steel for reinforcement of concrete -weldable reinforcing steel - bar, coil and decoiled product)	B500A	0.22	0.05	0.05	0.80	0.012	0.50	500-650	Actual YS X 1.05	-	2.5%	≤16mm(4D) - 1st Bend 90° - 2nd Bend 20° >16mm(7D) - 1st Bend 90° - 2nd Bend 20°
	B500B							Actual YS X 1.08	5%			
	B500C							1.15 < Actual YS X 1.35	7.5%			
ASTM A615/ A615M (Deformed and plain carbon-steel bars for concrete reinforcement)	Grade 40/280	-	-	0.06	-	-	-	280	420	According to Bar designation	-	According to Bar designation
	Grade 60/420	-	-	0.06	-	-	-	420	620			
	Grade 75/520	-	-	0.06	-	-	-	520	690			
	Grade 80/550	-	-	0.06	-	-	-	550	725			

d= nominal diameter YS= yield stress So= original cost sectional area

WEIGHT TABLE

Nominal Diameter mm	9	10	12	16	20	25	32	40
Cross-sectional area mm²	63.6	78.5	113.1	201.1	314.2	490.9	804.2	1256.6
Kg per metre	0.499	0.617	0.888	1.58	2.47	3.85	6.31	9.86
Kg per 12M	5.988	7.404	10.656	18.96	29.64	46.2	75.72	118.32
Pieces per bundle	168	138	96	54	34	22	14	9
M/T per bundle	1.006	1.022	1.023	1.024	1.008	1.016	1.060	1.065

Standard length is 12m. Special lengths and imperial sizes available on request. **Available sizes in mm** 9,10,12,16,20,22,25,28,32,40.