

Product standard list

I perform various checks such as the cause of the severe quality control system, a chemical examination for ingredient, a shape, dimensions inspection in us and aim at the making of product superior to the night and day.

Symbol of grade		
Division	Standards	Symbol of grade
Deformed steel bars	A615/A615M	G-40
		G-60
	A706/A706M	G-60
		G-80

Chemical composition (%)							
Standards	Symbol of grade	C	Si	Mn	P	S	C.E.(※)
A615/A615M	G-40	—	—	—	0.060 max.	—	—
	G-60	—	—	—	0.060 max.	—	—
A706/A706M	G-60	0.30 max.	0.50 max.	1.50 max.	0.035 max.	0.045 max.	0.055 max.
	G-80	0.30 max.	0.50 max.	1.50 max.	0.035 max.	0.045 max.	0.055 max.

※ C.E.(%)=C+(Mn/6)+(Cu/40)+(Ni/20)+(Cr/10)-(Mo/50)-(V/10)

Mechanical properties							
Standards	Symbol of grade	Yield point or proof stress psi(Mpa)	Tensile strength psi(Mpa)	Tensile test piece	Elongation %	Bendability	
						Bend angle	Inside radius 3(10) · 4(13) · 5(16)
A615/A615M	G-40	40000 min. (280)	60000 min. (420)	Like rolling	12min. (※)	180°	3.5 × Nominal diameter
A615/A615M	G-60	60000 min. (420)	90000 min. (620)	Like rolling	9min.	180°	3.5 × Nominal diameter
A706/A706M	G-60	60000 to 78000 (420 to 540)	80000 min. (550) (※2)	Like rolling	14min.	180°	3.5 × Nominal diameter
A706/A706M	G-80	80000 to 98000 (550 to 675)	100000 min. (690) (※2)	Like rolling	12min.	180°	3.5 × Nominal diameter

(※) No3.(10) is 11% min.

(※2) Tensile strength shall not be less than 1.25 times the actual yield strength.

Dimension, mass and allowable limits of knots							
Bar Designation No.	Nominal Weight, lb/ft (Nominal Mass, kg/m)	Nominal Dimensions			Deformation Requirements, in. (mm)		
		Diameter, in. (mm)	Cross-Sectional Area in. (mm ²)	Perimeter, in. (mm)	Maximum Average Spacing	Minimum Average Height	Maximum Gap (Chord of 12.5 % of Nominal Perimeter)
3(10)	0.376(0.560)	0.375(9.5)	0.11(71)	1.178(29.9)	0.262(6.7)	0.015(0.38)	0.143(3.6)
4(13)	0.668(0.994)	0.500(12.7)	0.20(129)	1.571(39.9)	0.350(8.9)	0.020(0.51)	0.191(4.9)
5(16)	1.043(1.552)	0.625(15.9)	0.31(199)	1.963(49.9)	0.437(11.1)	0.028(0.71)	0.239(6.1)

Tolerances on mass of one piece	
No.	Tolerance
3(10) · 4(13) · 5(16)	-6% min.

Mass table

Packing (ASTM A615 Rebar to the USA)									
Size #	Dia. (")	Dia. (mm)	Length (ft)	(m)	weight (lbs/ft)	(kg/m)	Bundle (Sub)	(pcs/bdl.)	(kg/bdl.)
3	.3/8	9.5	20	6.096	0.3763	0.56	38	266	907
			30	9.144	0.3763				1,362
			40	12.192	0.3763				1,814
4	.1/2	12.7	20	6.096	0.6679	0.994	30	150	909
			30	9.144	0.6679				1,363
			40	12.192	0.6679				1,818
5	.5/8	15.9	20	6.096	1.0429	1.552	24	96	908
			30	9.144	1.0429				1,362
			40	12.192	1.0429				1,816