

PT. TOYOGIRI IRON STEEL

JIS G 3112

Designation	Nominal Diameter (d) mm	Nominal Peripheral Length (l) cm	Nominal Sectional Area (S) cm ²	Unit Mass kg/m	Maximum Value of Mean Interval between Knots mm	Height of Knot		Minimum Value of Sum of Clearance between Knots mm	Angle between Knot and Axial Line
						Min Value mm	Max Value mm		
D 6	6.35	2.0	0.3167	0.249	4.4	0.3	0.6	5.0	45° min
D 10	9.53	3.0	0.7133	0.56	6.7	0.4	0.8	7.5	
D 13	12.7	4.0	1.267	0.995	8.9	0.5	1.0	10.0	
D 16	15.9	5.0	1.986	1.56	11.1	0.7	1.4	12.5	
D 19	19.1	6.0	2.865	2.25	13.4	1.0	2.0	15.0	
D 22	22.2	7.0	3.871	3.04	15.5	1.1	2.2	17.5	
D 25	25.4	8.0	5.067	3.98	17.8	1.3	2.6	20.0	
D 29	28.6	9.0	6.424	5.04	20	1.4	2.8	22.5	
D 32	31.8	10.0	7.942	6.23	22.3	1.6	3.2	25.0	
D 35	34.9	11.0	9.566	7.51	24.4	1.7	3.4	27.5	
D 38	38.1	12.0	11.400	8.95	26.7	1.9	3.8	30.0	
D 41	41.3	13.0	13.400	10.5	28.9	2.1	4.2	32.5	
D 51	50.8	16.0	20.270	15.9	35.6	2.5	5.0	40.0	

Symbol of Grade	Yield Point or 0.2 % Proof Stress	Tensile Strength	Tensile Test Piece	Elongation	Bendability	
	N/mm ²	N/mm ²		%	Bend Angle	Inside Radius
SR 235	235 min	380 to 520	No. 2	20 min	180°	1.5 X Nominal Diameter
			No. 3	24 min		
SR 295	295 min	440 to 600	No. 2	18 min	180°	Diameter up to and Incl. D 16 mm 1.5 X Nominal Diameter
			No. 3	20 min		Diameter over D 16 mm 2 X Nominal Diameter
SD 295A	295 min	440 to 600	Equivalent to No. 2	16 min	180°	Up to and Incl. D 16 1.5 X Nominal Diameter
			Equivalent to No. 3	18 min		Over D 16 2 X Nominal Diameter
SD 295B	295 to 390	440 min	Equivalent to No. 2	16 min	180°	Up to and Incl. D 16 1.5 X Nominal Diameter
			Equivalent to No. 3	18 min		Over D 16 2 X Nominal Diameter
SD 345	345 to 440	490 min	Equivalent to No. 2	18 min	180°	Up to and Incl. D 16 1.5 X Nominal Diameter
			Equivalent to No. 3	20 min		Over D 16 Up to and Incl. D 41 2 X Nominal Diameter
SD 390	390 to 510	560 min	Equivalent to No. 2	16 min	180°	2.5 X Nominal Diameter
			Equivalent to No. 3	18 min		
SD 490	490 to 625	620 min	Equivalent to No. 2	12 min	90°	Up to and Incl. D 25 2.5 X Nominal Diameter
			Equivalent to No. 3	14 min		Over D 25 3 X Nominal Diameter