

**A. DIMENSIONS AND MASS**

Designation	Nominal Diameter	Nominal peripheral length	Nominal Section Area	Unit Mass	Maximum Value of mean interval between knots	Height of knot		Maximum value of sum of clearance between knots	Angle between knot and axial line
						Min. value	Max. Value		
	mm	cm	cm <sup>2</sup>	kg / m	mm	mm	mm	mm	
<b>D-4</b>	4.23	1.3	0.14	0.11	3	0.2	0.4	3.3	45 0 min
<b>D-5</b>	5.29	1.7	0.219	0.173	3.7	0.2	0.4	4.3	
<b>D-6</b>	6.35	2	0.316	0.249	4.4	0.3	0.6	5	
<b>D-8</b>	7.94	2.5	0.495	0.389	5.6	0.3	0.6	6.3	
<b>D-10</b>	9.53	3	0.7133	0.56	6.7	0.4	0.8	7.5	
<b>D-13</b>	12.7	4	1.267	0.995	8.9	0.5	1	10	
<b>D-16</b>	15.9	5	1.986	1.56	11.1	0.7	1.4	12.5	
<b>D-19</b>	19.1	6	2.865	2.25	13.4	1	2	15	
<b>D-22</b>	22.2	7	3.871	3.04	15.5	1.1	2.2	17.5	
<b>D-25</b>	25.4	8	5.067	3.98	17.8	1.3	2.6	20	
<b>D-29</b>	28.6	9	6.424	5.04	20	1.4	2.8	22.5	
<b>D-32</b>	31.8	10	7.942	6.23	22.3	1.6	3.2	25	
<b>D-35</b>	34.9	11	9.566	7.51	24.4	1.7	3.4	27.5	
<b>D-38</b>	38.1	12	11.4	8.95	26.7	1.9	3.8	30	
<b>D-41</b>	41.3	13	13.4	10.5	28.9	2.1	4.2	32.5	
<b>D-51</b>	50.8	16	20.27	15.9	35.6	2.5	5	40	

**B. CHEMICAL COMPOSITION**

GRADE	CHEMICAL COMPOSITION					
	C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	C+Mn/6 (Max)
SR-235	-	-	-	0.050	0.050	-
SR-295 A	-	-	-	0.050	0.050	-
SD-295 A	-	-	-	0.050	0.050	-
SD-295 B	0.27	0.55	1.50	0.040	0.040	-
SD-345	0.27	0.55	1.60	0.040	0.040	0.50
SD-390	0.29	0.55	1.80	0.040	0.040	0.55
SD-490	0.32	0.55	1.80	0.040	0.040	0.60

**C. MECHANICAL PROPERTIES**

Grade	Yield point or 0.2% proof Stress N/mm <sup>2</sup>	Tensile Strength N/mm <sup>2</sup>	Tensile Test Piece	Elongation(%)	Bendability	
					Bendangle	Inside Radius
SR-235	235	380 - 52	No.2	20 min.	180 <sup>0</sup>	1.5 x Nominal diameter
			No. 14 A	22 min.		
SR-295A	295	440 – 600	No.2	18 min.	180 <sup>0</sup>	1.5 x Nominal diameter for diameter 16 mm or less.
			No.14A	19 min.		2.0 x Nominal diameter for diameter more than 16 mm or less.
SD295 A	295 - 390	440 min.	Equivalent to No. 2	16 min.	180 <sup>0</sup>	1.5 x Nominal diameter for diameter D 16 mm or under
			Equivalent to No. 14A	17 min.		2.0 x Nominal diameter for diameter over D 16
SD-295B	295-390	440 min.	Equivalent to No. 2	16 min.	180 <sup>0</sup>	1.5 x Nominal diameter for diameter D 16 mm or under
			Equivalent to No. 14A	17 min.		2.0 x Nominal diameter for diameter over D 16
SD-345	345-440	490	Equivalent to No. 2	18 min.	180 <sup>0</sup>	1.5 x Nominal diameter for diameter D 16 mm or under
			Equivalent to No. 14A	19 min.		2.0 x Nominal diameter for diameter over D 16 up to and incl.D41 2.0 x Nominal diameter for diameter D 51
SD-390	390-510	560 min.	Equivalent to No. 2	16 min.	180 <sup>0</sup>	2.5 x Nominal diameter
			Equivalent to No. 14A	17 min.		
SD-490	490-625	620min.	Equivalent to No. 2	12 min	90 <sup>0</sup>	2.5 x Nominal diameter for diameter D 25 or under
			Equivalent to No. 14A	13 min		3.0 x Nominal diameter for diameter D 25