



JIS Standard VCON

The four types of product conforming to the JIS Standard can be provided according to the needs of our customers.



Chemical composition of Vcon

Type code	Chemical constituents %					
	C	Si	Mn	P	S	C+ $\frac{Mn}{6}$
SD295A	—	—	—	0.050 or below	0.050 or below	—
SD345	0.27 or below	0.55 or below	1.60 or below	0.040 or below	0.040 or below	0.50 or below
SD390	0.29 or below	0.55 or below	1.80 or below	0.040 or below	0.040 or below	0.55 or below
SD490	0.32 or below	0.55 or below	1.80 or below	0.040 or below	0.040 or below	0.60 or below

Mechanical property of Vcon

Type code	Yield point or 0.2% proof stress N / mm ²	Tensile strength N / mm ²	Tension test specimen	Elongation (2) %	Bending angle	Bendability	
						Inner radius	
SD295A	295 or above	440 ~ 600	Equivalent to No.2 test piece (specified in JIS Z2201)	16 or above	180°	D16 and below	1.5 times larger than the nominal diameter
			Equivalent to No. 14A test piece (specified in JIS Z2201)	17 or above		Above D16	2 times larger than the nominal diameter
SD345	345-440	490 or above	Equivalent to No.2 test piece (specified in JIS Z2201)	18 or above	180°	D16 and below	1.5 times larger than the nominal diameter
			Equivalent to No. 14A test piece (specified in JIS Z2201)	19 or above		Above D16, and at or below D38	2 times larger than the nominal diameter
SD390	390-510	560 or above	Equivalent to No.2 test piece (specified in JIS Z2201)	16 or above	180°		2.5 times larger than the nominal diameter
			Equivalent to No. 14A test piece (specified in JIS Z2201)	17 or above			
SD490	490-625	620 or above	Equivalent to No.2 test piece (specified in JIS Z2201)	12 or above	90°	D25 and below	2.5 times larger than the nominal diameter
			Equivalent to No. 14A test piece (specified in JIS Z2201)	13 or above		Above D25	3 times larger than the nominal diameter

If the bar designation is over D32: for every increase of the bar designation by 3, 2% should be subtracted from each elongation value in the list. However, the value of subtraction should not exceed 4%.

Standard dimensions & mass of Vcon products and tolerance limits of knots

Bar designation	Nominal diameter (d) mm	Nominal perimeter (l) cm	Nominal cross-sectional area (S) cm ²	Unit mass kg/m	Maximum average spacing of knots mm	Knot height		Maximum value of sum of knot gaps mm
						Minimum mm	Maximum mm	
D 10	9.53	3.0	0.7133	0.560	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	20.0	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	11.40	8.95	26.7	1.9	3.8	30.0

Mass tolerance of Vcon—per piece/set

Size	Tolerance per piece	Tolerance per set
D10 or above, and below D16 (bar designation)	± 6%	± 5%
D16 or above, and below D29 (bar designation)	± 5%	± 4%
D29 or above (bar designation)	± 4%	± 3.5%

Length tolerance of Vcon

Length	Tolerance
7m or below	+40mm 0
Over 7m	For every increase of length by 1m (or a fraction less than 1m), 5mm should be added to the upper tolerance value. However, the value should not exceed 120 mm.

Markings on each Vcon

SD295A	
SD345	
SD390	
SD490	

