PC STRAND

Low Relaxation

	Standard	Grade Mpa	Nominal Diameter mm.	Diameter Tolerance mm.	Norminal Area mm.²	Unit Weight kg./ 1,000m.	Weight Tolerance %	Pitch	Minimum Breaking Load kN.	Minimum Yield Load kN. 0.1%	0.2%	at 1.0% extension	Minimum Elongation %	Straightness	1,000-HR. Relaxation (% Max.)		MOE Gpa or kN/mm2
> 2% diff ØC & ØO	TIS 420 - 1997	1 720	9.30	-	51.60	405.00	+4/-2	12-18	88.8	72.8	75.4	-	3.5	≤ 25 mm. of 1 m.	*80% Fm*	4.5	-
			10.80	-	69.70	546.00	+4/-2	12-18	120.0	98.4	102.0	-	3.5			4.5	
			12.40	-	92.90	729.00	+4/-2	12-18	160.0	131.0	136.0	-	3.5			4.5	
			15.20	-	139.00	1101.00	+4/-2	12-18	239.0	196.0	203.0	-	3.5			4.5	
		1 860	9.50	-	54.80	432.00	+4/-2	12-18	102.0	83.6	86.6	-	3.5			4.5	
			11.10	-	74.20	580.00	+4/-2	12-18	138.0	113.0	117.0	-	3.5			4.5	
			12.70	-	98.70	774.00	+4/-2	12-18	184.0	151.0	156.0	-	3.5			4.5	
			15.20	-	139.00	1101.00	+4/-2	12-18	259.0	212.0	220.0	-	3.5			4.5	
> 3% diff ØC & ØO	AS/NZS 4672 - 2007	1 720	9.30	-	51.60	405.00	+4/-2	12-18	88.8	72.8	75.4	-	3.5	≤ 25 mm. of 1 m.	*80% Fm*	3.5	185 - 205
		1 850	9.50	-	55.00	432.00	+4/-2	12-18	102.0	83.6	86.6	-	3.5			3.5	
		1 870	11.10	-	73.90	580.00	+4/-2	12-18	138.0	113.0	117.0	-	3.5			3.5	
		1 720	12.40	-	92.90	729.00	+4/-2	12-18	160.0	131.0	136.0	-	3.5			3.5	
		1 870	12.70	-	98.70	774.0	+4/-2	12-18	184.0	151.0	156.0	-	3.5			3.5	
		1 840	12.90	-	100.00	785.0	+4/-2	12-18	186.0	158.0	165.0	-	3.5			3.5	
		1 750	15.20	-	143.00	1122.0	+4/-2	12-18	250.0	205.0	212.0	-	3.5			3.5	
		1 830	15.20	-	143.00	1122.0	+4/-2	12-18	261.0	214.0	222.0	-	3.5			3.5	
		1 780	18.00	-	190.00	1492.0	+4/-2	12-18	338.0	277.0	287.0	-	3.5			3.5	
		1 830	18.00	-	190	1492	+4/-2	12-18	353.0	289.0	300.0	-	3.5			3.5	
	ASTM A416 - 2015	1 725	7.9	+/-0.4	37.00	294.0	-	12-16	64.5	-	-	58.1	3.5	-	*80% Fm*	3.5	-
			9.5	+/-0.4	52.00	405.0	-	12-16	89	-	-	80.1	3.5			3.5	
			11.1	+/-0.4	69.70	548.0	-	12-16	120	-	-	108.1	3.5			3.5	
			12.7	+/-0.4	92.90	730.0	-	12-16	160	-	-	144.1	3.5			3.5	
			15.2	+/-0.4	139.00	1090.0	-	12-16	240	-	-	216.2	3.5			3.5	
		1 860	9.53	+0.65/-0.15	55.0	430	-	12-16	102	-	-	92.1	3.5			3.5	
			11.1	+0.65/-0.15	74.2	580	-	12-16	138	-	-	124.1	3.5			3.5	
			12.7	+0.65/-0.15	98.7	780	-	12-16	184	-	-	165.3	3.5			3.5	
			15.2	+0.65/-0.15	140.0	1100	-	12-16	261	-	-	234.6	3.5			3.5	
			15.7	+0.65/-0.15	150.0	1200	-	12-16	279	-	-	251.4	3.5			3.5	
			17.8	+0.65/-0.15	190.0	1500	-	12-16	353	-	-	318.0	3.5			3.5	
	ASTM A886 - 2012	1 725	7.90 - Indent	+/-0.4	37.40	294	-	12-16	64.5	-	-	58.1	3.5	-	*80% Fm*	3.5	-
			9.50 - Indent	+/-0.4	51.60	405	-	12-16	89.0	-	-	80.1	3.5			3.5	
			11.10 - Indent	+/-0.4	69.70	548	-	12-16	120.1	-	-	108.2	3.5			3.5	
			12.70 - Indent	+/-0.4	92.90	730	-	12-16	160.3	-	-	144.3	3.5			3.5	
			15.20 - Indent	+/-0.4	139.40	1094	-	12-16	240.5	-	-	216.5	3.5			3.5	
			7.90 - Indent	+0.65/-0.15	39.90	313	-	12-16	74.3	-	-	66.9	3.5			3.5	
		1 860	9.50 - Indent	+0.65/-0.15	54.80	432	-	12-16	101.9	-	-	91.7	3.5			3.5	-
			11.10 - Indent	+0.65/-0.15	74.20	582	-	12-16	138.0	-	-	124.2	3.5			3.5	
			12.70 - Indent	+0.65/-0.15	98.70	775	-	12-16	183.6	-	-	165.2	3.5			3.5	
			15.20 - Indent	+0.65/-0.15	140.00	1102	-	12-16	260.4	-	-	234.4	3.5			3.5	
> 2% diff ØC & ØO	BS 5896 - 2012	Y1670S7	15.20	-	139.0	1,086.0	+2/-2	14-18	232- 267	204.0	-	-	3.5	≤ 25 mm. of 1 m.	*80% Fma*	4.5	195
		Y1770S7	9.30	-	52.0	406.1	+2/-2	14-18	92- 106	81.0	-	-	3.5			4.5	
		Y1770S7	11.00	-	70.0	546.7	+2/-2	14-18	124- 143	109.0	-	-	3.5			4.5	
		Y1770S7	12.50	-	93.0	726.3	+2/-2	14-18	165- 190	145.0	-	-	3.5			4.5	
		Y1770S7	15.70	-	150.0	1,172.0	+2/-2	14-18	266- 306	234.0	-	-	3.5			4.5	
		Y1860S7	8.00	-	38.0	296.8	+2/-2	14-18	70.7- 81.3	62.2	-	-	3.5			4.5	
		Y1860S7	9.30	-	52.0	406.1	+2/-2	14-18	96.7- 111	85.1	-	-	3.5			4.5	
		Y1860S7	9.60	,	55.0	429.6	+2/-2	14-18	102- 117	89.8	-	-	3.5			4.5	
		Y1860S7	11.30	-	75.0	585.8	+2/-2	14-18	140- 161	123.0	-	-	3.5			4.5	
		Y1860S7	12.50	-	93.0	726.3	+2/-2	14-18	173- 199	152.0	-	-	3.5			4.5	
		Y1860S7	12.90	-	100.0	781.0	+2/-2	14-18	186- 214	164.0	-	-	3.5			4.5	
		Y1860S7	15.20	-	139.0	1,086.0	+2/-2	14-18	259- 298	228.0	-	-	3.5			4.5	
		Y1860S7	15.70	-	150.0	1,172.0	+2/-2	14-18	279- 321	246.0	-	-	3.5			4.5	
> 3% diff ØC & ØO	prEN 10138 - 2012	Y1770S7	9.30	-	52.0	406.1	+2/-2	14-18	92.0 - 106.0	81.0	-	-	3.5	≤ 25 mm. of 1 m.	*70% Fma*	2.5	195
			11.00	-	70.0	546.7	+2/-2	14-18	124.0-143.0	109.0	-	-	3.5			2.5	
			12.50	-	93.0	726.3	+2/-2	14-18	165.0-190.0	145.0	-	-	3.5			2.5	
			12.90	-	100.0	781.0	+2/-2	14-18	177.0 - 204.0	156.0	-		3.5			2.5	
			15.20	-	139.0	1,086.0	+2/-2	14-18	246.0-283.0	216.0	-	-	3.5			2.5	
			15.70	-	150.0	1,172.0	+2/-2	14-18	266.0-306.0	234.0	-	-	3.5			2.5	
		Y1860S7	9.30	-	52.0	406.1	+2/-2	14-18	96.7-111.0	85.1	-	-	3.5			2.5	
			9.60	-	55.0	429.6	+2/-2	14-18	102.0-117.0	89.8	-	-	3.5			2.5	
			11.30	-	75.0	585.8	+2/-2	14-18	140.0-161.0	123.0	-	-	3.5			2.5	
			12.50	-	93.0	726.3	+2/-2	14-18	173.0-199.0	152.0	-	-	3.5			2.5	
			12.90	-	100.0	781.0	+2/-2	14-18	186.0-214.0	164.0	-	-	3.5			2.5	
			15.20	-	139.0	1,086.0	+2/-2	14-18	259.0-298.0	228.0	-	-	3.5			2.5	
			15.70	-	150.0	1,172.0	+2/-2	14-18	279.0-321.0	246.0	-	-	3.5			2.5	
	JIS G 3536 - 2014	SWPR7AL 1 720	9.30	+0.4/-0.2	51.61	405.0	-	12-18	88.8	-	75.5	-	3.5	-	*70% Fm*	2.5	-
			10.80	+0.4/-0.2	69.68	546.0	-	12-18	120.0	-	102.0	-	3.5			2.5	
			12.40	+0.4/-0.2	92.90	729.0	-	12-18	160.0	-	136.0	-	3.5			2.5	
			15.20	+0.4/-0.2	138.70	1,101.0	-	12-18	240.0	-	204.0	-	3.5			2.5	
		SWPR7BL 1 860	9.50	+0.4/-0.2	54.84	432.0	-	12-18	102.0	-	86.8	-	3.5			2.5	
			11.10	+0.4/-0.2	74.19	580.0	-	12-18	138.0	-	118.0	-	3.5			2.5	
			12.70	+0.4/-0.2	98.71	774.0	-	12-18	183.0	-	156.0	-	3.5			2.5	
			15.20	+0.4/-0.2	138.70	1,101.0	-	12-18	261.0	-	222.0	-	3.5			2.5	
	LNEC E 453 - 2011	1 860	9.30	-	52.00	406.1	+2/-2	14-18	96.7 - 111				3.5	≤ 25 mm. of 1 m.	*70% Fma*	2.5	185 - 205
		1 860	11.30	-	75.00	585.8	+2/-2	14-18	140 - 160	83.0	-	-	3.5			2.5	
		1 860	12.50	-	93.00	726.3	+2/-2	14-18	173 - 199	120.0	-	-	3.5			2.5	
		1 860	13.00	-	102.00	796.9	+2/-2	14-18	190 - 219	149.0	-	-	3.5			2.5	
		1 860	15.20	-	139.00	1,086.0	+2/-2	14-18	259 - 298	160.0	-	-	3.5			2.5	
		1 860	15.30	-	140.00	1,093.0	+2/-2	14-18	260 - 299	224.0	-	-	3.5			2.5	
		1 770	15.70	-	150.00	1,172.0	+2/-2	14-18	266 - 306	228.0	-	-	3.5			2.5	
		1 860	15.70	-	150.00	1,172.0	+2/-2	14-18	279 - 321	240.0	-	-	3.5			2.5	
	XP A35 - 045 - 3	1 860	9.30	-	52.00	406.12	+2/-2	*mm.*130-167	96.7	86.1	-	-	3.5	≤ 25 mm.	*80% Fma*	4.5	-
		1 860	12.50	-	93.00	726.33	+2/-2	175-225	173.0	154.0	-	-	3.5			4.5	
		1 860	12.90	-	100.00	781.00	+2/-2	181-232	186.0	166.0	-	-	3.5			4.5	
		1 860	15.20	-	139.00	1,085.59	+2/-2	213-274	259.0	231.0	-	-	3.5			4.5	
		1 860	15.70	-	150.00	1,171.50	+2/-2	220-283	279.0	248.0	-	-	3.5			4.5	
	MS 1138 - 4 2007	1 860	9.50	-	54.80	432.00	+4/-2	12-18	102.00	-	86.60	-	3.5	≤ 25 mm. of 1 m.		4.5	-
		1 860	12.70	-	98.70	774.00	+4/-2	12-18	184.00	-	156.00	-	3.5			4.5	
		1 860	15.20	-	139.00	1,101.00	+4/-2	12-18	259.00	-	220.00	-	3.5			4.5	
	SNI 1154-2011	KBjP P7 R A *(LR grade 1725)*	6.35	+/- 0.41	23.22	182	-	12-16	40.0	-	-	36	3.5	-	*70% Fm*	2.5	-
			7.94	+/- 0.41	37.42	294	-	12-16	64.5	-	-	58.1	3.5			2.5	
			9.53	+/- 0.41	51.61	405	-	12-16	89.0	-	-	80.1	3.5			2.5	
			11.11	+/- 0.41	69.68	548	-	12-16	120.1	-	-	108.1	3.5			2.5	
			12.7	+/- 0.41	92.90	730	-	12-16	160.1	-	-	144.1	3.5			2.5	
			15.24	+/- 0.41	139.35	1094	-	12-16	240.2	-	-	216.2	3.5			2.5	
		KBjP P7 R B *(LR grade 1860)*	9.53	+0.65/ -0.15	54.84	432	-	12-16	102.3	-	-	92.1	3.5			2.5	
			11.11	+0.65/ -0.15	74.19	582	-	12-16	137.9	-	-	124.1	3.5			2.5	
			12.7	+0.65/ -0.15	98.71	775	-	12-16	183.7	-	-	165.3	3.5			2.5	
			15.24	+0.65/ -0.15	140.00	1102	-	12-16	260.7	-	-	234.6	3.5			2.5	
	TSE 5680 - 1988	S7B (1860)	9.53	+0.3	54.84	430	-	12-16	104.196	85.55	-	93.78	3.5	-	*80% Fm*	3.5	-
			12.7	+0.4	98.71	775	-	12-16	187.549	153.99	-	168.79	3.5			3.5	
			15.2	-0.2	139.35	1094	-	12-16	264.765	217.39	-	238.29	3.5			3.5	
	IS 14268 - 1995	Class II	9.5	+0.66/ -0.15	54.8	432	-	12-16	102.3	-	92.1	-	3.5	-	*70% Fm*	2.5	-
			12.7	+0.66/ -0.15	98.7	775	-	12-16	183.7	-	165.3	-	3.5			2.5	
			15.2	+0.66/ -0.15	140.0	1102	-	12-16	260.7	-	234.6	-	3.5			2.5	

Remark: Fm = Maximum force of specification
Fma = Maximum force of actual