

V•ROD STANDARD

		6mm	10mm	12mm	16mm	20mm	22mm	25mm
		V•ROD	V•ROD	V•ROD	V•ROD	V•ROD	V•ROD	V•ROD
Nominal tensile strength	MPa	874	856	786	751	728	693	675
Guaranteed design tensile strength	MPa	784	765	708	683	656	625	597
Equivalent load at GUTS (nominal Ø)	N	24829	54511	89687	135188	186975	242467	302504
	Lbfs	5582	12254	20162	30391	42034	54509	68006
Nominal tensile modulus	GPa	46.1	45.4	46.3	48.2	47.6	46.4	51.9
Tensile strain	%	1.90	1.89	1.70	1.56	1.53	1.49	1.30
Poisson's ratio	(-)	0.25	0.21	0.26	0.25	0.25	0.25	0.28

Development length (CSA-S6-00 clause 16.8.3)	mm	256	354	433	533	587	643	722
Splice length (CSA-S6-00 clause 16.8.3.1)	mm	333	461	563	693	763	836	938
Development length (CSA-S806-02 clause 9.3)	mm	262	362	443	545	600	658	738
Development length (ACI 440.1R-06 Clause 11.3)	mm	309	421	495	599	641	681	734
Splice length (ACI 440.1R-06 Clause 11.3)	mm	401	547	644	779	833	885	954

note: all development lengths and splice lengths are given without correction factors (such as concrete cover)

Nominal Compressive strength	MPa	553	538	473	504	519	488	339
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Nominal Flexural strength	MPa	1200	1161	1005	930	882	811	776
Nominal Flexural modulus	GPa	48.8	46.1	46.8	46.8	45.1	44.6	45.1
Flexural strain	%	2.46	2.52	2.15	1.99	1.96	1.82	1.72

Nominal Shear strength	MPa	225	183	212	195	200	203	203
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Nominal Bond strength	MPa	20.5	17.5	14.1	13.7	16.7	16.5	14.8
Bond dependent coefficient	(-)	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Longitudinal coefficient of thermal expansion	xE-6/C	5.9	5.5	6.7	6.4	6	6	6.1
	xE-6/F	3.2	3	3.7	3.5	3.3	3.3	3.4
Transverse coefficient of thermal expansion	xE-6/C			25	24.9		23.4	23.2
	xE-6/F			13.9	13.8		13	12.9
Moisture absorption	%	0.65	0.47	0.38	0.25	0.21	0.355	0.17
Glass content	% vol	59.1	59.6	60.3	60.1	60.8	60.1	60.7
	% weight	77.1	77.4	77.9	77.8	78.3	77.8	78.2
Ratio of modulus of elasticity to strength	(-)	52.7	53.0	58.9	64.2	65.4	67.0	76.9
Weight	g/m	85	174	294	436	630	837	1084
	lb/ft	0.057	0.117	0.198	0.293	0.423	0.562	0.728
Effective cross-sectional area	(mm ²)	38.97	78.00	136.70	224.36	292.57	387.9	527.34
Nominal cross-sectional area	(mm ²)	31.67	71.26	126.68	197.93	285.02	387.95	506.71