V•ROD 60

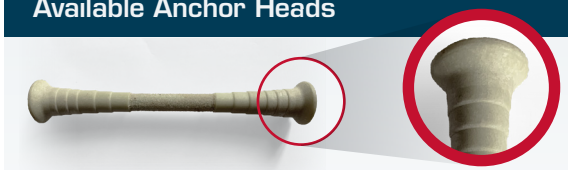
GLASS FIBER REINFORCED POLYMER (GFRP) REBAR

REVISION: May 2019

Product Data Sheet – V•ROD 60

		#2 (6M)	#3 (10M)	#4 (12M)	#5 (15M)	#6 (20M)	#7 (22M)	#8 (25M)	#9 (30M)	#10 (32M)
Guaranteed tensile strength* (ASTM D7205)	MPa	1 100	1 100	1 100	1 100	1 100	1 100	1 100	1 000	1 000
	ksi	159.5	159.5	159.5	159.5	159.5	159.5	159.5	145	145
Minimum tensile modulus (ASTM D7205)	GPa	60								
	ksi	8 702.3								
Guaranteed transverse shear capacity (ASTM D7617)	MPa	180								
	ksi	26.1								
Resin		vinylester								
Weight	g/m	78	175	310	442	633	863	1 127	1 426	1 761
	lb/ft	0.052	0.118	0.208	0.297	0.425	0.58	0.757	0.958	1.183
Effective cross-sectional area (including sand coating)** (CSA S806 Annex A)	mm²	37.2	83.8	145	232.9	326.8	438.2	572.3	724.3	894.2
	in²	0.058	0.130	0.225	0.361	0.507	0.679	0.887	1.123	1.386
Effective diameter	mm²	6.9	10.33	13.59	17.22	20.39	23.6	26.99	30.4	33.7
	in²	0.272	0.407	0.535	0.678	0.803	0.929	1.063	1.197	1.327
Nominal cross-sectional area (CSA S807 Table 1)	mm²	32	71	129	199	284	387	510	645	819
	in²	0.05	0.110	0.199	0.308	0.440	0.6	0.790	1	1.269

Available Anchor Heads



		#4 GFRP	#5 GFRP	#6 GFRP
Minimum pull-out strength	kN	80	100	100
	kips	18	22	22

Please refer to the **V•ROD** Grade III data sheet for the properties of the bars.

Product homologated for use in TL5 barriers.

COMPLIES WITH THE FOLLOWING STANDARDS:

- **GRADE III CSA** S807-10
- **GRADE III MTO**
- **ASTM D7957** D7957-17

* The nominal guaranteed tensile strength must not be used to calculate the strength of the bent portion of a bent bar. Instead use the minimum guaranteed tensile strength found in the technical data sheet of bent **V•ROD bars**.

** Please contact **Pultrall** for dowelling applications.

Development and splice length are available upon request but should be determined by the design engineer.

The guaranteed value presented in this document is the mean value minus 3 times the standard deviation.

It is the responsibility of the design engineers to contact the bar manufacturer to get the latest updates of this technical data sheet (also available at **www.vrod.ca**). For any additional technical results or litterature, please contact **Pultrall**.

PULTRALL

700, 9e Rue Nord, Thetford Mines (Quebec) CANADA G6G 6Z5
Phone: **418 335-3202** | Fax: **418 335-5117** | **www.vrod.ca**