

TECHNICAL DATA SHEET

ABHUVA INNOVATION PRIVATE LIMITED

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GST NO 27AAVCA2919G1ZD



A. Property			Specifications						
Type of Fibre			E-CR Glass						
Type of Resin			Epoxy / Vinyl Ester						
Production Process			Pull Winding Pultrusion						
Bar Geometry			Indented						
Surface Treatment			Optional if Required						
Coefficient of Longitudinal Thermal Expansion			10x10-6 /K						
Density			1.9 Gms/CC						
Colour			Light Brown						
			Values for GFRP Rebar Dia in mm						
B. Property	Test Method	Unit	6	8	10	12	16	20	25
Mean Ultimate Tensile Strength	ASTM D7205	Mpa	1200	1100	1000	900	850	800	750
Standard Deviation of Ultimate Tensile Strength		Mpa	Not Available						
Number of Samples for Standard Deviation		Count	Not Available						
Mean Transverse Shear Strength		Mpa	160	160	160	160	160	160	160
Standard Deviation of Transverse Shear Strength		Mpa	Not Available						
Number of Samples for Standard Deviation		Count	Not Available						
Mean Bond Strength		Mpa	7.9	7.9	7.9	7.9	7.9	7.9	7.9
Standard Deviation of bond Strength		Mpa	Not Available						
Number of Samples for Standard Deviation		Count	Not Available						
			Values for GFRP Rebar Dia in mm						
C. Property	Test Method	Unit	6	8	10	12	16	20	25
Nominal Cross Section Area	ASTM D792	Sq mm	28	50	78	113	201	314	490
Unit Weight / Length	ASTM D792	Kg/m	0.060	0.100	0.155	0.225	0.400	0.620	0.980
Nominal Ultimate Tensile Force	ASTM D7205	KN	33	54	78	100	170	250	365
Nominal Ultimate Tensile strength	ASTM D7205	Mpa	1179	1080	1000	885	846	796	745
Nominal Ultimate tensile strain	ASTM D7205	%	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Nominal Ultimate transverse shear strength	ASTM D7617	Mpa	160	160	160	160	160	160	160
Nominal Tensile Modulus of Elasticity	ASTM D7205	Mpa	55000	55000	55000	55000	55000	55000	55000
Nominal Bond Strength	ASTMD7913	Mpa	9.9	9.9	9.9	9.9	9.9	9.9	9.9
			Values for GFRP Rebar Dia in mm						
D. Property	Test Method	Unit	6	8	10	12	16	20	25
Fibre Mass Content	ASTM D2584	%	79	79	79	79	78	78	77
Mean Glass Transition Tempreature	ASTM E1356	° C	102°	102°	102°	102°	102°	102°	102°
Degree of Cure	ASTM E2160	%	97°	97°	97°	97°	97°	97°	97°
Moisture Absorption in 24 Hours at 50 ° C	ASTM D570	%	≤0.25%	≤0.25%	≤0.25%	≤0.25%	≤0.25%	≤0.25%	≤0.25%
Moisture Absorption to saturation at 50 ° C	ASTM D570	%	≤1.0%	≤1.0%	≤1.0%	≤1.0%	≤1.0%	≤1.0%	≤1.0%
Total Enthalpy of Polymerisation	ASTM E2160	J/g	Not Available						
Alkaline Resistance : Tensile load retention	ASTM D7705-A	%	≥80%	≥80%	≥80%	≥80%	≥80%	≥80%	≥80%

Disclaimer

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. All information mentioned in this document is believed to be approximate & is given without acceptance of liability. All values have been generated from limited data. The values listed for Diameter, weight, Area and Tensile strengths are approximate values, unless otherwise noted. Users should make their own assessment of the suitability of any product for the purpose required. The following factors are unrelated to GFRP Rebar by ABHUVA and may affect performance of the structure or flatwork: soil/ support type and compaction, load type and magnitude, engineering design, installation or implementation, concrete strength and thickness, joint layout and ground slope.