



E-LM 1810

Fiber Type: E-Glass
 Architecture: 0 Warp Unidirectional
 Dry Thickness: 0.039 in. / 0.99 mm
 Total Weight: 27.06 oz/sq.yd / 917 g/sq.m

Roll Specifications			Fiber Architecture Data	
Roll Width: 50 in / 1270 mm	Roll Weight: 178 lb / 81 kg	Roll Length: 74 yd / 68 m	0 ° : 17.92 oz/sq.yd / 608 g/sq.m	
			45 ° : n/a	
			90 ° : 0.14 oz/sq.yd / 5 g/sq.m	
			-45 ° : n/a	
			Chopped Mat : 9.00 oz/sq.yd / 305 g/sq.m	

1: Packaging: box or bag.

2: Weights do not include polyester stitching.

Laminated Properties

0 °

0 °

Laminate Weight				
	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
Fiber	0.19 lb/sq.ft	0.92 kg/sq.m	0.19 lb/sq.ft	0.92 kg/sq.m
Resin	0.11 lb/sq.ft	0.53 kg/sq.m	0.22 lb/sq.ft	1.09 kg/sq.m
Total	0.30 lb/sq.ft	1.45 kg/sq.m	0.41 lb/sq.ft	2.01 kg/sq.m

Physical Properties				
	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
Density	1.04 oz/cu.in	1.80 g/cc	0.91 oz/cu.in	1.58 g/cc
Fiber Content	63% by Wt.	45% by Vol.	46% by Wt.	28% by Vol.
Thickness	0.032 in	0.8 mm	0.050 in	1.3 mm

Laminate Moduli

	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
	Ex	3.87 MSI	26.68 GPa	2.66 MSI
Ey	1.64 MSI	11.29 GPa	1.17 MSI	8.10 GPa
Gxy	0.72 MSI	4.93 GPa	0.49 MSI	3.41 GPa
Ex,flex.	3.68 MSI	25.34 GPa	2.53 MSI	17.44 GPa
Ey,flex.	1.55 MSI	10.72 GPa	1.12 MSI	7.69 GPa

Ultimate Stress

	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
	Long. Ten.	63.5 KSI	437.5 MPa	43.7 KSI
Long. Comp.	73.3 KSI	505.1 MPa	50.4 KSI	347.6 MPa
Trans. Ten.	26.8 KSI	185.1 MPa	19.3 KSI	132.8 MPa
Trans. Comp.	31.0 KSI	213.7 MPa	22.2 KSI	153.3 MPa
In-Plane Shear	16.3 KSI	112.5 MPa	11.3 KSI	77.8 MPa
Long. Flex.	87.4 KSI	602.8 MPa	60.2 KSI	414.9 MPa
Trans. Flex.	37.0 KSI	255.0 MPa	26.5 KSI	183.0 MPa

In-Plane Stiffness, "EA"

	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
	(EA)x	122,709 lb/in	21,489 N/mm	133,413 lb/in
(EA)y	51,910 lb/in	9,090 N/mm	58,832 lb/in	10,303 N/mm
(GA)xy	22,687 lb/in	3,973 N/mm	24,783 lb/in	4,340 N/mm

Ultimate In-Plane Load

	E-LM 1810 Resin Infused		E-LM 1810 Open Mold	
	Long. Ten.	2,012 lb/in	352 N/mm	2,188 lb/in
Long. Comp.	2,323 lb/in	407 N/mm	2,526 lb/in	442 N/mm
Trans. Ten.	851 lb/in	149 N/mm	965 lb/in	169 N/mm
Trans. Comp.	983 lb/in	172 N/mm	1,114 lb/in	195 N/mm
In-Plane Shear	517 lb/in	91 N/mm	565 lb/in	99 N/mm

Notes:

- 1: Resin infused laminate made with a poly / vinyl ester resin blend.
- 2: Open mold laminate made with poly / vinyl ester resin blend.
- 3: All standard reinforcements should be infused with a flow aid or Vectorfusion® reinforcements.
- 4: All properties are given assuming a symmetric or quasisymmetric laminate schedule.



3500 Lakewood Dr. Phenix City, AL 36867 tel. 334 291 7704 fax. 334 291 7743

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Disclaimer:

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VP makes no warranty whatsoever as to the accuracy of any such predicted physical performance, and customer acknowledges that customer is solely responsible for determining the performance and fitness for a particular use of any product produced by customer utilizing a fabric or material produced or manufactured by VP. Specifications of reinforcements may change without notice.