



## E-LTM 1603

Fiber Type: E-Glass  
 Architecture: 0/90 Biaxial  
 Dry Thickness: 0.027 in. / 0.69 mm  
 Total Weight: 18.79 oz/sq.yd / 637 g/sq.m

Roll Specifications			Fiber Architecture Data	
Roll Width: 50 in / 1270 mm	Roll Weight: 179 lb / 81 kg	Roll Length: 106 yd / 97 m	0 ° : 8.96 oz/sq.yd / 304 g/sq.m	
			45 ° : n/a	
			90 ° : 6.83 oz/sq.yd / 232 g/sq.m	
			-45 ° : n/a	
			Chopped Mat : 3.00 oz/sq.yd / 102 g/sq.m	

1: Packaging: box or bag.

2: Weights do not include polyester stitching.

### Laminated Properties

0 °

0 °

Laminate Weight				
	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
Fiber	0.13 lb/sq.ft	0.64 kg/sq.m	0.13 lb/sq.ft	0.64 kg/sq.m
Resin	0.06 lb/sq.ft	0.30 kg/sq.m	0.13 lb/sq.ft	0.64 kg/sq.m
Total	0.19 lb/sq.ft	0.93 kg/sq.m	0.26 lb/sq.ft	1.27 kg/sq.m

### Physical Properties

	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
Density	1.08 oz/cu.in	1.87 g/cc	0.94 oz/cu.in	1.63 g/cc
Fiber Content	68% by Wt.	50% by Vol.	50% by Wt.	32% by Vol.
Thickness	0.020 in	0.5 mm	0.031 in	0.8 mm

**Laminate Moduli**

	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
	Ex	3.68 MSI	25.38 GPa	2.51 MSI
Ey	3.29 MSI	22.67 GPa	2.23 MSI	15.41 GPa
Gxy	0.66 MSI	4.52 GPa	0.46 MSI	3.14 GPa
Ex,flex.	3.50 MSI	24.11 GPa	2.38 MSI	16.41 GPa
Ey,flex.	3.12 MSI	21.53 GPa	2.12 MSI	14.64 GPa

**Ultimate Stress**

	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
	Long. Ten.	60.4 KSI	416.2 MPa	41.1 KSI
Long. Comp.	69.7 KSI	480.5 MPa	47.4 KSI	327.1 MPa
Trans. Ten.	53.9 KSI	371.7 MPa	36.7 KSI	252.7 MPa
Trans. Comp.	62.2 KSI	429.1 MPa	42.3 KSI	291.7 MPa
In-Plane Shear	14.9 KSI	103.1 MPa	10.4 KSI	71.6 MPa
Long. Flex.	83.2 KSI	573.5 MPa	56.6 KSI	390.4 MPa
Trans. Flex.	74.3 KSI	512.2 MPa	50.5 KSI	348.2 MPa

**In-Plane Stiffness, "EA"**

	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
	(EA)x	72,260 lb/in	12,654 N/mm	77,003 lb/in
(EA)y	64,531 lb/in	11,301 N/mm	68,680 lb/in	12,027 N/mm
(GA)xy	12,870 lb/in	2,254 N/mm	13,990 lb/in	2,450 N/mm

**Ultimate In-Plane Load**

	E-LTM 1603 Resin Infused		E-LTM 1603 Open Mold	
	Long. Ten.	1,185 lb/in	208 N/mm	1,263 lb/in
Long. Comp.	1,368 lb/in	240 N/mm	1,458 lb/in	255 N/mm
Trans. Ten.	1,058 lb/in	185 N/mm	1,126 lb/in	197 N/mm
Trans. Comp.	1,222 lb/in	214 N/mm	1,300 lb/in	228 N/mm
In-Plane Shear	293 lb/in	51 N/mm	319 lb/in	56 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.



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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.