



C-LA 1812

Fiber Type: Carbon
 Architecture: 0 Warp Unidirectional
 Dry Thickness: 0.039 in. / 0.99 mm
 Total Weight: 19.06 oz/sq.yd / 646 g/sq.m

VECTORULTRA™
 ADVANCED COMPOSITE REINFORCEMENTS

Roll Specifications			Fiber Architecture Data	
Roll Width: 50 in / 1270 mm	Roll Weight: 151 lb / 69 kg	Roll Length: 89 yd / 81 m	0 ° : 17.86 oz/sq.yd / 606 g/sq.m	
			45 ° : n/a	
			90 ° : n/a	
			-45 ° : n/a	
			Chopped Mat : 1.20 oz/sq.yd / 41 g/sq.m	

1: Packaging: box or bag.
 2: Weights do not include polyester stitching.

Laminated Properties

0 °

0 °

Laminate Weight				
	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
Fiber	0.13 lb/sq.ft	0.65 kg/sq.m	0.13 lb/sq.ft	0.65 kg/sq.m
Resin	0.07 lb/sq.ft	0.36 kg/sq.m	0.17 lb/sq.ft	0.82 kg/sq.m
Total	0.21 lb/sq.ft	1.01 kg/sq.m	0.30 lb/sq.ft	1.47 kg/sq.m

Physical Properties				
	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
Density	0.89 oz/cu.in	1.54 g/cc	0.82 oz/cu.in	1.42 g/cc
Fiber Content	64% by Wt.	54% by Vol.	44% by Wt.	34% by Vol.
Thickness	0.026 in	0.7 mm	0.041 in	1.0 mm

Laminate Moduli

	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
	Ex	14.26 MSI	98.30 GPa	9.26 MSI
Ey	0.74 MSI	5.07 GPa	0.69 MSI	4.75 GPa
Gxy	0.62 MSI	4.25 GPa	0.43 MSI	2.98 GPa
Ex,flex.	13.54 MSI	93.38 GPa	8.80 MSI	60.66 GPa
Ey,flex.	0.70 MSI	4.82 GPa	0.65 MSI	4.51 GPa

Ultimate Stress

	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
	Long. Ten.	144.7 KSI	997.5 MPa	94.0 KSI
Long. Comp.	121.4 KSI	837.4 MPa	78.9 KSI	543.9 MPa
Trans. Ten.	13.6 KSI	93.5 MPa	12.7 KSI	87.6 MPa
Trans. Comp.	17.9 KSI	123.1 MPa	16.7 KSI	115.3 MPa
In-Plane Shear	15.0 KSI	103.2 MPa	10.5 KSI	72.3 MPa
Long. Flex.	115.4 KSI	795.5 MPa	74.9 KSI	516.7 MPa
Trans. Flex.	25.8 KSI	177.7 MPa	24.1 KSI	166.5 MPa

In-Plane Stiffness, "EA"

	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
	(EA)x	368,381 lb/in	64,510 N/mm	377,404 lb/in
(EA)y	19,005 lb/in	3,328 N/mm	28,074 lb/in	4,916 N/mm
(GA)xy	15,935 lb/in	2,791 N/mm	17,611 lb/in	3,084 N/mm

Ultimate In-Plane Load

	C-LA 1812 Resin Infused		C-LA 1812 Open Mold	
	Long. Ten.	3,738 lb/in	655 N/mm	3,830 lb/in
Long. Comp.	3,138 lb/in	550 N/mm	3,215 lb/in	563 N/mm
Trans. Ten.	351 lb/in	61 N/mm	518 lb/in	91 N/mm
Trans. Comp.	461 lb/in	81 N/mm	681 lb/in	119 N/mm
In-Plane Shear	387 lb/in	68 N/mm	427 lb/in	75 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:

As a service to customers, Vectorply Corporation ("VP") may provide computer-generated predictions of the physical performance of a product using a reinforcement fabric produced by VP in combination with other materials or systems.

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.