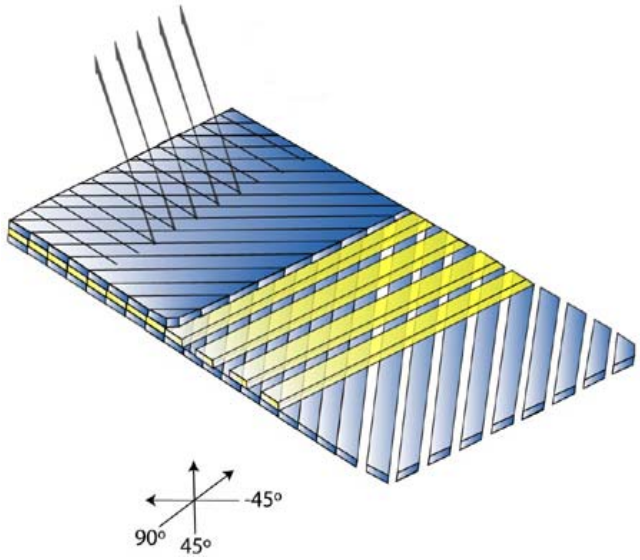
VECTORPLY®
Performance Composite Reinforcements



E-TTX 4000

Fiber Type: E-Glass
Architecture: 45/90/-45 Weft Triaxial
Dry Thickness: 0.047 in. / 1.19 mm
Total Weight: 39.30 oz/sq.yd / 1333 g/sq.m

Roll Specifications

Roll Width:	Roll Weight:	Roll Length:
50 in / 1270 mm	224 lb / 102 kg	63 yd / 58 m

Fiber Architecture Data

0 ° :	n/a
45 ° :	11.65 oz/sq.yd / 395 g/sq.m
90 ° :	16.00 oz/sq.yd / 542 g/sq.m
-45 ° :	11.65 oz/sq.yd / 395 g/sq.m
Chopped Mat :	n/a

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

Laminated Properties 0 ° 0 °

Laminate Weight	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
Fiber	0.27 lb/sq.ft	1.33 kg/sq.m	0.27 lb/sq.ft	1.33 kg/sq.m
Resin	0.12 lb/sq.ft	0.57 kg/sq.m	0.22 lb/sq.ft	1.09 kg/sq.m
Total	0.39 lb/sq.ft	1.90 kg/sq.m	0.50 lb/sq.ft	2.42 kg/sq.m

Physical Properties	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
Density	1.10 oz/cu.in	1.90 g/cc	0.98 oz/cu.in	1.69 g/cc
Fiber Content	70% by Wt.	52% by Vol.	55% by Wt.	37% by Vol.
Thickness	0.039 in	1.0 mm	0.056 in	1.4 mm

Laminate Modulii

	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
Ex	2.26 MSI	15.61 GPa	1.61 MSI	11.09 GPa
Ey	3.58 MSI	24.69 GPa	2.60 MSI	17.90 GPa
Gxy	1.29 MSI	8.92 GPa	0.93 MSI	6.41 GPa
Ex,flex.	2.15 MSI	14.83 GPa	1.53 MSI	10.53 GPa
Ey,flex.	3.40 MSI	23.45 GPa	2.47 MSI	17.01 GPa

Ultimate Stress

	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
Long. Ten.	22.6 KSI	156.1 MPa	16.1 KSI	110.9 MPa
Long. Comp.	22.6 KSI	156.1 MPa	16.1 KSI	110.9 MPa
Trans. Ten.	67.8 KSI	467.4 MPa	49.2 KSI	338.9 MPa
Trans. Comp.	67.8 KSI	467.4 MPa	49.2 KSI	338.9 MPa
In-Plane Shear	24.5 KSI	168.9 MPa	17.6 KSI	121.4 MPa
Long. Flex.	21.5 KSI	148.3 MPa	15.3 KSI	105.3 MPa
Trans. Flex.	80.9 KSI	557.9 MPa	58.7 KSI	404.5 MPa

In-Plane Stiffness, "EA"

	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
(EA)x	89,186 lb/in	15,618 N/mm	90,745 lb/in	15,891 N/mm
(EA)y	141,074 lb/in	24,705 N/mm	146,528 lb/in	25,660 N/mm
(GA)xy	50,976 lb/in	8,927 N/mm	52,487 lb/in	9,191 N/mm

Ultimate In-Plane Load

	E-TTX 4000 Resin Infused		E-TTX 4000 Open Mold	
Long. Ten.	892 lb/in	156 N/mm	907 lb/in	159 N/mm
Long. Comp.	892 lb/in	156 N/mm	907 lb/in	159 N/mm
Trans. Ten.	2,671 lb/in	468 N/mm	2,774 lb/in	486 N/mm
Trans. Comp.	2,671 lb/in	468 N/mm	2,774 lb/in	486 N/mm
In-Plane Shear	965 lb/in	169 N/mm	994 lb/in	174 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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