

# **polyply**® **Composites**

## **Sheet Laminate Typical Properties**

Polyply Grade			L-40	L-50	L-50HT
NEMA Grade			GPO-2	GPO-3	N/A
Color			Red	Red	NC
U.L. Recognized File Number			E82624	E82624	E82624
<b>Mechanical Properties</b>					
Tensile Strength	psi	D638	9,800	10,000	10,820
Flexural Strength	psi	D790	22,000	23,200	26,092
Compressive Strength	psi	D695	32,000	32,800	35,500
Flexural Modules	psi x 106	D790	1.2	1.23	1.28
Shear Strength	psi	D732	14,000	14,000	11,000
Izod Impact Strength (notched)	ft-lb/in	D256	8	8.9	11.3
Water Absorption	% by weight	D570	0.23	0.21	0.28
Barcol Hardness		D2583	50	50	50
Specific Gravity		D792	1.8	1.8	1.75
<b>Electric Properties</b>					
Dielectric Strength (- in oil )	volts / mil	D149	415	400	420
Dielectric Strength (parallel in oil)	kV	D149	61	57	52.1
High Voltage Arc Resistance	sec	D495	200+	200+	181
Dielectric Constant @ 60 Hz		D150	4.6	4.8	6.34
Dielectric Constant @ M Hz		D150	4.5	4.7	4.44
Dissipation Factor @ 60 Hz		D150	0.014	0.013	0.054
Dissipation Factor @ M Hz		D150	0.012	0.011	0.065
Comparative Tracking Index	volts	D3638	500+	500+	600+
<b>Flame Resistance Properties</b>					
U.L. Subject 94		UL94	VO	VO	HB
<b>Thermal Properties</b>					
Coefficient of Thermal Expansion	in/in/C x 10-5	D696	2	2	
Thermal Conductivity	btu/hr/ft2/in/°F	C177	1.8	1.9	
U.L. Temperature Index-Electrical	°C	UL746B	130	130	220
U.L. Temperature Index-Mechanical	°C	UL746B	160	140	210

Unless otherwise indicated, all properties published are based on tests performed on standard ASTM test samples and according to ASTM test methods. Values shown are for test samples made from production materials and they are believed to be typical. No warranty is expressed or implied.

POLYPLY COMPOSITES LLC  
 1540 Marion Street  
 Grand Haven, MI 49417  
 (616) 842-6330 \* FAX (616) 842-5320  
[www.polyplycomposites.com](http://www.polyplycomposites.com)