

## Grade L Linen Phenolic

Grade L Linen Phenolic uses a fine weave (less than 4 ounce/square yard) cotton fabric commonly called linen, combined with phenolic resin to provide a better machining material than grade C. It is commonly used for smaller and more intricate shapes than grade C. It is designated by MIL-I-24768/15 Type FBI and the NEMA grade is L.

Property	Units	Grade L Linen Phenolic
<b>Physical</b>		
Specific Gravity	-	1.34
Moisture Absorption (.062")	%	2.3
<b>Mechanical</b>		
Rockwell Hardness (.062")	M Scale	100
Flexural Strength (.062") LW	psi	24,500
CW	psi	18,500
Flexural Modulus (.062") LW	psi	1,700,000
CW	psi	1,300,000
Tensile Strength (.125") LW	psi	14,000
CW	psi	10,000
Izod Impact Strength E-48/50 (.500") LW	ft-lb/in	1.70
CW	ft-lb/in	1.35
Compressive Strength flatwise (.500")	psi	38,000
Bond Strength (.500")	lbs	2,000
Shear Strength (perpendicular) (.062")	psi	13,500
<b>Thermal</b>		
Maximum Operating Temperature	°F	257
Coefficient of Thermal Expansion (.062") X-axis	in/in/°F	$10 \times 10^{-6}$
Y-axis	in/in/°F	$10.5 \times 10^{-6}$
Flammability Rating - U. L. 94		HB
<b>Electrical</b>		
Permittivity (.062") Condition D-24/23	-	5.8
Dissipation Factor (.062") Condition D-24/23	-	.070
Dielectric Breakdown Condition - A (.062") D-48/50	V	45,000 2,000
Electric Strength Condition - A (.062") D-48/50	V/mil	575 450
Arc Resistance (.125") D-495	sec	15
Comparative Tracking Index (.125") D3638	-	170

LW – Length Wise of the sheet, direction of manufacturing

CW – Cross Wise, perpendicular to Length Wise

*NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*