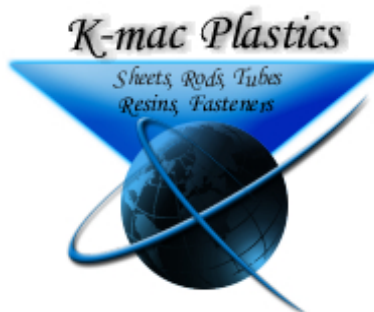


## GE Plastics LEXAN 121R Polycarbonate

Physical Properties	Metric	English	Comments
Density	1.2 g/cc	0.0434 lb/in <sup>3</sup>	ASTM D 792
Water Absorption	0.15 %	0.15 %	24 hours @ 73F; ASTM D 570
Water Absorption at Saturation	0.35 %	0.35 %	Equilibrium, 73F; ASTM D 570
Water Absorption at Saturation	0.58 %	0.58 %	Equilibrium, 212F; ASTM D 570
Linear Mold Shrinkage	0.005 - 0.007 cm/cm	0.005 - 0.007 in/in	Flow, 0.125 inch; ASTM D 955
Melt Flow	17.5 g/10 min	17.5 g/10 min	300C/1.2 kgf (O); ASTM D 1238
<b>Mechanical Properties</b>			
Hardness, Rockwell M	70	70	ASTM D 785
Hardness, Rockwell R	118	118	ASTM D 785
Tensile Strength @ Break	68.9 MPa	10000 psi	Type I, 2.0 in/min; ASTM D 638
Tensile Strength @ Yield	62.1 MPa	9000 psi	Type I, 2.0 in/min; ASTM D 638
Elongation at Break	125 %	125 %	Type I, 2.0 in/min; ASTM D 638
Elongation at Yield	7 %	7 %	Type I, 2.0 in/min; ASTM D 638
Flexural Modulus	2.34 GPa	340 ksi	0.05 in/min, 2" span; ASTM D 790
Flexural Yield Strength	96.5 MPa	14000 psi	0.05 in/min, 2" span; ASTM D 790
Fatigue Strength	6.89 MPa	1000 psi	Fatigue Limit, 2.5 MM cycles; ASTM D 671
Izod Impact, Unnotched	32 J/cm	60 ft-lb/in	73F; ASTM D 4812
Gardner Impact @ 23°C	62.1 J	45.8 ft-lb	Instrumented Impact Energy @ peak, 73F; ASTM D 3763
Tensile Impact Strength	546 kJ/m <sup>2</sup>	260 ft-lb/in <sup>2</sup>	Type "S"; ASTM D 1822
Falling Dart Impact	169 J	125 ft-lb	73F; ASTM D 3029
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D 1044
Izod Impact, Notched	6.94 J/cm	13 ft-lb/in	73F; ASTM D 256



### Electrical Properties

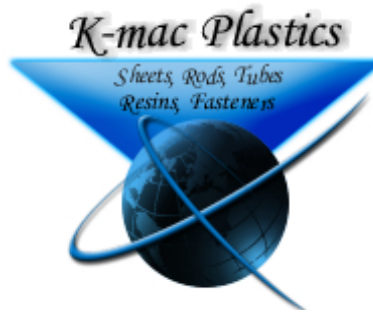
Volume Resistivity	Min 1e+017 ohm-cm	Min 1e+017 ohm-cm	ASTM D 257
Dielectric Constant	2.96	2.96	1 MHz; ASTM D 150
Dielectric Constant	3.17	3.17	60 Hz; ASTM D 150
Dielectric Strength	15 kV/mm	380 V/mil	in air, 125 mils; ASTM D 149
Dissipation Factor	0.0009	0.0009	60 Hz; ASTM D 150
Dissipation Factor	0.01	0.01	1 MHz; ASTM D 150
Comparative Tracking Index	250 - 400 V	250 - 400 V	(+/- 0.125 inch); PLC Code 2; UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	(+/- 0.125 inch); PLC Code 2; UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	Surface (+/- 0.125 inch); PLC Code 1; UL 746A
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80 mm/min	1 - 3.15 in/min	(+/- 0.125 inch); PLC Code 2; UL 746A

### Thermal Properties

CTE, linear 68°F	68.4 $\mu\text{m}/\text{m}\cdot\text{°C}$	38 $\mu\text{in}/\text{in}\cdot\text{°F}$	Flow, -40F to 200F; ASTM E 831
Heat Capacity	1.26 J/g-°C	0.3 BTU/lb-°F	ASTM C 351
Thermal Conductivity	0.25 W/m-K	1.74 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177
Deflection Temperature at 0.46 MPa (66 psi)	138 °C	280 °F	0.250 inch, unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	129 °C	265 °F	0.250 inch, unannealed; ASTM D 648
Vicat Softening Point	154 °C	310 °F	Rate B; ASTM D 1525
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746B
UL RTI, Mechanical without Impact	130 °C	266 °F	UL 746B
Flammability, UL94	HB	HB	Tested Thickness = 0.028 in.

### Optical Properties

Refractive Index	1.586	1.586	ASTM D 542
Haze	1 %	1 %	0.100 inch; ASTM D 1003
Transmission, Visible	88 %	88 %	0.100 inch; ASTM D 1003



### **Descriptive Properties**

Radiant Panel Listing	UL tested	
UL File Number, USA	E121562	
UV-light, water exposure/immersion	F2	UL746C