

## SABIC Innovative Plastics LEXAN 141 Polycarbonate (North America)

**Categories:** [Polymer](#); [Thermoplastic](#); [Polycarbonate](#)

**Material Notes:** Information provided by GE Plastics for their North American product line. MatWeb has a separate entry for the European data sheet.

Saudi Basic Industries Corporation (SABIC) announced on August 31st, 2007, the completion of its purchase of GE Plastics.

**Vendors:** [Click here to view all available suppliers for this material.](#)

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Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ASTM D 792
Water Absorption	0.150 %	0.150 %	24 hours @ 73F; ASTM D 570
Water Absorption at Saturation	0.350 %	0.350 %	Equilibrium, 73F; ASTM D 570
	0.580 %	0.580 %	Equilibrium, 212F; ASTM D 570
Linear Mold Shrinkage	0.00500 - 0.00700 cm/cm	0.00500 - 0.00700 in/in	Flow, 0.125 inch; ASTM D 955
Melt Flow	10.5 g/10 min	10.5 g/10 min	300C/1.2 kgf (O); ASTM D 1238
Mechanical Properties	Metric	English	Comments
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	130 %	130 %	Type I, 2.0 in/min; ASTM D 638
Elongation at Yield	7.00 %	7.00 %	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 @# of Cycles 2.50e+6	1000 psi @# of Cycles 2.50e+6	Fatigue Limit; ASTM D 671
Izod Impact, Unnotched	32.0 J/cm	60.0 ft-lb/in	73F; ASTM D 4812
Gardner Impact @ 23°C	63.8 J	565 in-lb	Instrumented Impact Energy @ peak, 73F; ASTM D 3763
Tensile Impact Strength	578 kJ/m <sup>2</sup>	275 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	10.0	10.0	CS-17, 1 kg; ASTM D 1044
Izod Impact, Notched	8.01 J/cm	15.0 ft-lb/in	73F; ASTM D 256
Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D 257
Dielectric Constant	2.96 @Frequency 1e+6 Hz	2.96 @Frequency 1e+6 Hz	ASTM D 150
	3.17 @Frequency 60 Hz	3.17 @Frequency 60 Hz	ASTM D 150
Dielectric Strength	15.0 kV/mm	380 kV/in	in air, 125 mils; ASTM D 149
Dissipation Factor	0.000900 @Frequency 60 Hz	0.000900 @Frequency 60 Hz	ASTM D 150
	0.0100 @Frequency 1e+6 Hz	0.0100 @Frequency 1e+6 Hz	ASTM D 150
Comparative Tracking Index	250 - 400 V	250 - 400 V	(+/- 0.125 inch); PLC Code 2; UL 746A
Hot Wire Ignition, HWI	30.0 - 60.0 sec	30.0 - 60.0 sec	(+/- 0.125 inch); PLC Code 2; UL 746A
High Amp Arc Ignition, HAI	60.0 - 120 arcs	60.0 - 120 arcs	Surface (+/- 0.125 inch); PLC Code 1; UL 746A
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	(+/- 0.125 inch); PLC Code 2; UL 746A
Thermal Properties	Metric	English	Comments
CTE, linear	68.4 µm/m-°C @Temperature -40.0 - 93.3 °C	38.0 µin/in-°F @Temperature -40.0 - 200 °F	Flow Direction; ASTM E 831
Specific Heat Capacity	1.26 J/g-°C	0.300 BTU/lb-°F	ASTM C 351
Thermal Conductivity	0.270 W/m-K	1.87 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)	132 °C	270 °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	0.028 in.
Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D 542
Haze	1.00 %	1.00 %	0.100 inch; ASTM D 1003
Transmission, Visible	88.0 %	88.0 %	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

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's disclaimer and terms of use regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.