

LEXAN™ Resin 141 - Americas

Polycarbonate
SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

LEXAN™ 141 resin is a 11 MFR polycarbonate. UL94 HB rated.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E121562-220861
Search for UL Yellow Card	• SABIC • LEXAN™ Resin
Availability	• Latin America • North America
Uses	• Aerospace Applications • Appliances • Automotive Exterior Parts • Automotive Interior Parts • Automotive Lighting • Construction Applications • Electric Vehicle (EV) Applications • Electrical Parts • Electrical/Electronic Applications • Electronic Displays • Fluid Handling • Heavy Transportation • Industrial Applications • Lighting Applications • Material Handling • Medical/Healthcare Applications • Optical Applications • Pharmaceuticals • Surgical Instruments
Multi-Point Data	• Coefficient of Thermal Expansion vs. Temperature (ASTM E831) • Elastic Modulus vs. Temperature (ASTM D4065) • Flexural DMA (ASTM D5023) • Instrumented Impact (Energy) (ASTM D3763) • Instrumented Impact (Load) (ASTM D3763) • Shear DMA (ASTM D4065) • Specific Heat vs. Temperature (ASTM E1269) • Specific Volume vs. Temperature (PVT) • Tensile Creep (ASTM D2990) • Tensile Fatigue • Tensile Stress vs. Strain (ASTM D638) • Thermal Conductivity vs. Temperature (ASTM E1530) • Viscosity vs. Shear Rate (ASTM D3835)
Also Available In	• Asia Pacific

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	• •	1.19 1.20 g/cm ³	ASTM D792
Specific Volume		0.830 cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)		11 g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)		0.50 to 0.70 %	Internal Method
Water Absorption			ASTM D570
24 hr, 23°C		0.15 %	
Saturation, 23°C		0.35 %	
Equilibrium, 100°C		0.58 %	
Outdoor Suitability		f2	UL 746C



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Mechanical	Nominal Value Unit	Test Method
Tensile Strength ³		ASTM D638
Yield	62.0 MPa	
Break	68.0 MPa	
Tensile Elongation ³		ASTM D638
Yield	7.0 %	
Break	130 %	
Flexural Modulus ⁴ (50.0 mm Span)	2340 MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	96.0 MPa	ASTM D790
Taber Abrasion Resistance		ASTM D1044
1000 Cycles, 1000 g, CS-17 Wheel	10.0 mg	
Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	800 J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200 J/m	ASTM D4812
Instrumented Dart Impact		ASTM D3763
23°C, Energy at Peak	63.0 J	
Gardner Impact (23°C)	169 J	ASTM D3029
Tensile Impact Strength ⁵	577 kJ/m ²	ASTM D1822
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness		ASTM D785
M-Scale	70	
R-Scale	118	
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed, 6.40 mm	137 °C	
1.8 MPa, Unannealed, 6.40 mm	132 °C	
Vicat Softening Temperature	154 °C	ASTM D1525 ⁶
CLTE - Flow (-40 to 95°C)	6.8E-5 cm/cm/°C	ASTM E831
Specific Heat	1250 J/kg/°C	ASTM C351
Thermal Conductivity	0.27 W/m/K	ASTM C177
RTI Elec	130 °C	UL 746B
RTI Imp	130 °C	UL 746B
RTI Str	130 °C	UL 746B
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	> 1.0E+17 ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	15 kV/mm	ASTM D149
Dielectric Constant		ASTM D150
60 Hz	3.17	
50 kHz	3.17	
1 MHz	2.96	
Dissipation Factor		ASTM D150
50 Hz	9.0E-4	
60 Hz	9.0E-4	
1 MHz	0.010	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
High Amp Arc Ignition (HAI) ⁷	PLC 1	UL 746A



Electrical	Nominal Value Unit	Test Method
High Voltage Arc Resistance to Ignition (HVAR)	PLC 2	UL 746A
Hot-wire Ignition (HWI)	PLC 2	UL 746A
Flammability	Nominal Value Unit	Test Method
Flame Rating (0.71 mm)	HB	UL 94
Oxygen Index	25 %	ISO 4589-2
Radiant Panel Listing ⁸	True	
Optical	Nominal Value Unit	Test Method
Refractive Index	1.586	ASTM D542
Light Transmittance (2540 μm)	88.0 %	ASTM D1003
Haze (2540 μm)	1.00 %	ASTM D1003

Injection	Nominal Value Unit
Drying Temperature	120 °C
Drying Time	3.0 to 4.0 hr
Suggested Max Moisture	0.020 %
Suggested Shot Size	40 to 60 %
Rear Temperature	270 to 295 °C
Middle Temperature	280 to 305 °C
Front Temperature	295 to 315 °C
Nozzle Temperature	290 to 310 °C
Processing (Melt) Temp	295 to 315 °C
Mold Temperature	70 to 95 °C
Back Pressure	0.300 to 0.700 MPa
Screw Speed	40 to 70 rpm
Vent Depth	0.025 to 0.076 mm

Injection Notes

- Drying Time (Cumulative): 48 hr

Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.

³ Type I, 50 mm/min

⁴ 1.3 mm/min

⁵ Type S

⁶ Rate A (50°C/h), Loading 2 (50 N)

⁷ Surface

⁸ UL Tested

