

LEXAN™ 940 resin

Polycarbonate

SABIC Innovative Plastics

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

Opaque colors, medium viscosity, superior flame retardance.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E121562-220904
Search for UL Yellow Card	• SABIC Innovative Plastics • LEXAN™
Availability	• North America
Features	• Flame Retardant • Medium Viscosity
Appearance	• Colors Available • Opaque
Processing Method	• Injection Molding
Multi-Point Data	• Elastic Modulus vs Temperature (ASTM D4065) • Flexural DMA (ASTM D4065) • Instrumented Impact (Energy) (ASTM D3763) • Instrumented Impact (Load) (ASTM D3763) • Pressure-Volume-Temperature (PVT - Zoller Method) • Shear DMA (ASTM D4065) • Tensile Creep (ASTM D2990) • Tensile Fatigue • Tensile Stress vs. Strain (ASTM D638) • Thermal Conductivity vs. Temperature (ASTM E1530)

Physical	Nominal Value Unit	Test Method
Specific Gravity		ASTM D792
--	1.21 g/cm³	
--	1.22 g/cm³	
Specific Volume	0.835 cm³/g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70 %	Internal Method
Water Absorption		ASTM D570
24 hr	0.15 %	
Equilibrium, 23°C	0.35 %	
Equilibrium, 100°C	0.58 %	
Outdoor Suitability	f1	UL 746C
Mechanical	Nominal Value Unit	Test Method
Tensile Strength ⁴		ASTM D638
Yield	62.1 MPa	
Break	55.8 MPa	
Tensile Elongation ⁴		ASTM D638
Yield	7.0 %	
Break	90 %	
Flexural Modulus ⁵ (50.0 mm Span)	2240 MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	91.0 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)	640 J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200 J/m	ASTM D4812
Gardner Impact (23°C)	169 J	ASTM D3029
Tensile Impact Strength ⁶	525 kJ/m²	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	138 °C	
1.8 MPa, Unannealed, 6.40 mm	132 °C	
Vicat Softening Temperature	152 °C	ASTM D1525 ⁷
CLTE - Flow (-40 to 95°C)	6.8E-5 cm/cm/°C	ASTM E831
Thermal Conductivity	0.19 W/m/K	ASTM C177
RTI Elec	130 °C	UL 746
RTI Imp	120 °C	UL 746
RTI Str	130 °C	UL 746
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	> 1.0E+17 ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	17 kV/mm	ASTM D149
Dielectric Constant		ASTM D150
50 Hz	3.01	
60 Hz	3.01	
1 MHz	2.96	
Dissipation Factor		ASTM D150
50 Hz	9.0E-4	
60 Hz	9.0E-4	
1 MHz	0.010	
Arc Resistance ⁸	PLC 7	ASTM D495
Comparative Tracking Index (CTI)	PLC 2	UL 746
High Amp Arc Ignition (HAI)	PLC 3	UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746
Hot-wire Ignition (HWI)	PLC 2	UL 746
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.09 mm)	V-0	UL 94
Oxygen Index	35 %	ASTM D2863
Radiant Panel Listing (UL)	YES	
Injection	Nominal Value Unit	
Drying Temperature	121 °C	
Drying Time	3.0 to 4.0 hr	
Drying Time, Maximum	48 hr	
Suggested Max Moisture	0.020 %	
Suggested Shot Size	40 to 60 %	
Rear Temperature	271 to 293 °C	
Middle Temperature	282 to 304 °C	
Front Temperature	293 to 316 °C	
Nozzle Temperature	288 to 310 °C	
Processing (Melt) Temp	293 to 316 °C	
Mold Temperature	71.1 to 93.3 °C	
Back Pressure	0.345 to 0.689 MPa	
Screw Speed	40 to 70 rpm	
Vent Depth	0.025 to 0.076 mm	



Notes

- ¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
- ² 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.
- ³ Typical properties: these are not to be construed as specifications.
- ⁴ Type I, 50 mm/min
- ⁵ 1.3 mm/min
- ⁶ Type S
- ⁷ Rate B (120°C/h), Loading 2 (50 N)
- ⁸ Tungsten Electrode

