

LEXAN™ Resin 123R - Europe

Polycarbonate
SABIC

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

UL rated HB as of 10/97. 200 series recommended when V-2 rating required. Nonhalogenated. 17.5 MFR, for small, intricate parts. UV stabilized. Internal mold release.

General

Material Status	• Commercial: Active		
UL Yellow Card ¹	• E45329-236639		
Search for UL Yellow Card	• SABIC • LEXAN™ Resin		
Availability	• Europe		
Additive	• Mold Release	• UV Stabilizer	
Features	• Good Processability	• Low Viscosity	
Uses	• Aerospace Applications • Appliances • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Lighting • Automotive Window Encapsulation • Construction Applications	• Electrical/Electronic Applications • Electronic Displays • Household Goods • Industrial Applications • Lawn and Garden Equipment • Lenses • Lighting Applications • Medical/Healthcare Applications	• Non-specific Food Applications • Outdoor Applications • Packaging • Pharmaceuticals • Rail Applications • Sporting Goods
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent • Colors Available	• Opaque • Translucent	
Processing Method	• Injection Molding		
Also Available In	• Asia Pacific	• Latin America	• North America

Physical	Nominal Value Unit	Test Method
Density	1.20 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	21 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ³	0.50 to 0.70 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	0.35 %	
Equilibrium, 23°C, 50% RH	0.15 %	
Outdoor Suitability	f1	UL 746C

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2350 MPa	ISO 527-2/1
Tensile Stress		ISO 527-2/50
Yield	63.0 MPa	
Break	65.0 MPa	
Tensile Strain		ISO 527-2/50
Yield	6.0 %	
Break	100 %	
Flexural Modulus ⁴	2300 MPa	ISO 178
Flexural Stress ^{4, 5}	90.0 MPa	ISO 178
Taber Abrasion Resistance		Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	10.0 mg	



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Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		
-30°C ⁶	12 kJ/m ²	ISO 179/1eA
23°C ⁶	65 kJ/m ²	ISO 179/1eA
23°C	35 kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁶		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact Strength ⁷		ISO 180/1A
-30°C	11 kJ/m ²	
23°C	65 kJ/m ²	
Unnotched Izod Impact Strength ⁷		ISO 180/1U
-30°C	No Break	
23°C	No Break	
Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature ⁸		
0.45 MPa, Unannealed, 4.00 mm, 100 mm Span	133 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 4.00 mm, 100 mm Span	122 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	141 °C	ISO 306/B120
--	140 °C	ISO 306/B50
Ball Pressure Test		IEC 60695-10-2
123 to 127°C	Pass	
140°C ⁹	Pass	
CLTE - Flow (23 to 80°C)	7.0E-5 cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20 W/m/K	ISO 8302
RTI Elec	130 °C	UL 746
RTI Imp	130 °C	UL 746
RTI Str	130 °C	UL 746
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	17 kV/mm	IEC 60243-1
Relative Permittivity		IEC 60250
50 Hz	2.70	
60 Hz	2.70	
1 MHz	2.70	
Dissipation Factor		IEC 60250
50 Hz	1.0E-3	
60 Hz	1.0E-3	
1 MHz	0.010	
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.75 mm	HB	
3.0 mm	HB	
Glow Wire Flammability Index (1.0 mm)	850 °C	IEC 60695-2-12
Oxygen Index	25 %	ISO 4589-2
Optical	Nominal Value Unit	Test Method
Refractive Index	1.586	ISO 489
Transmittance (2540 μm)	88.0 to 90.0 %	ASTM D1003
Haze (2540 μm)	< 0.800 %	ASTM D1003



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Injection	Nominal Value Unit
Drying Temperature	120 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	0.020 %
Hopper Temperature	60 to 80 °C
Rear Temperature	260 to 280 °C
Middle Temperature	270 to 290 °C
Front Temperature	280 to 300 °C
Nozzle Temperature	270 to 290 °C
Processing (Melt) Temp	280 to 300 °C
Mold Temperature	80 to 100 °C

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 Tensile Bar

⁴ 2.0 mm/min

⁵ at Yield

⁶ 80*10*3 sp=62mm

⁷ 80*10*3 mm

⁸ 120*10*4 mm

⁹ Approximate Maximum



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Where to Buy

Supplier

SABIC

Web: <http://www.sabic.com/>

Distributor

3Polymer (Guangzhou) Chemical Technology Co., Ltd.

Telephone: +86-20-3466-7988

Web: <http://3polymer.com>

Availability: China

AECTRA

Telephone: +33-4-72-54-36-42

Web: <https://www.aectra.fr/>

Availability: Bulgaria, Romania

GRÄSSLIN

Telephone: +49-7721-4040-261

Web: <https://www.graesslin-kunststoffe.de>

Availability: Germany

Lenorplastics

Telephone: +41-61-706-11-11

Web: <https://www.lenorplastics.ch>

Availability: Switzerland

Plastoplan

Telephone: +43-1-25040-0

Web: <https://www.plastoplan.com/>

Availability: Austria, Czech Republic, Hungary, Poland, Slovakia

POLYMIX

POLYMIX is a Pan European distribution company. Contact POLYMIX for availability of individual products by country.

Telephone: +33-3-8920-1380

Web: <http://www.polymix.eu/>

Availability: France

RESINEX Group

RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.

Telephone: +32-14-672511

Web: <http://www.resinex.com/>

Availability: Europe

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Netherlands, South Africa

