

LEXAN™ 143R resin

Polycarbonate

SABIC Innovative Plastics Europe

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

LEXAN 143R is a medium viscosity multi purpose U.V. stabilized grade and contains a release agent to ensure easy processing. LEXAN 143R is available in transparent, translucent and opaque colours.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E45329-101012967 • E45329-236637
Search for UL Yellow Card	• SABIC Innovative Plastics Europe • LEXAN™
Availability	• Europe
Additive	• Mold Release • UV Stabilizer
Features	• Good Processability • Medium Viscosity
RoHS Compliance	• RoHS Compliant
Appearance	• Clear/Transparent • Opaque • Colors Available • Translucent
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density	1.20 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	12.0 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ⁴	0.50 to 0.70 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	0.35 %	
Equilibrium, 23°C, 50% RH	0.15 %	

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	70.0 MPa	
Tensile Strain		ISO 527-2/50
Yield	6.0 %	
Break	110 %	
Flexural Modulus ⁵	2300 MPa	ISO 178
Flexural Stress ^{5,6}	90.0 MPa	ISO 178
Taber Abrasion Resistance		Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	10.0 mg	

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		
-30°C ⁷	14 kJ/m ²	ISO 179/1eA
23°C ⁷	73 kJ/m ²	ISO 179/1eA
23°C	35 kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁷		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact Strength ⁸		ISO 180/1A
-30°C	12 kJ/m ²	
23°C	70 kJ/m ²	



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Impact	Nominal Value Unit	Test Method
Unnotched Izod Impact Strength ⁸		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 ⁹		
0.45 MPa, Unannealed, 100 mm Span	136 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	125 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	153 °C	ISO 306/A50
--	141 °C	ISO 306/B50
--	142 °C	ISO 306/B120
Ball Pressure Test		IEC 60695-10-2
125°C	Pass	
140°C ¹⁰	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	125 °C	UL 746
RTI Str	125 °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		IEC 60243-1
1.00 mm ¹¹	15 kV/mm	
3.20 mm, in Oil	17 kV/mm	
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	
Comparative Tracking Index	250 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.750 mm	HB	
3.00 mm	HB	
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)	< 0.80 %	ASTM D1003
Injection	Nominal Value Unit	
Drying Temperature	120 °C	
Drying Time	2.0 to 4.0 hr	
Suggested Max Moisture	0.020 %	
Hopper Temperature	60.0 to 80.0 °C	
Rear Temperature	260 to 280 °C	
Middle Temperature	270 to 290 °C	



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Injection	Nominal Value Unit
Front Temperature	280 to 310 °C
Nozzle Temperature	270 to 290 °C
Processing (Melt) Temp	280 to 310 °C
Mold Temperature	80.0 to 110 °C

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 Tensile Bar

⁵ 2.0 mm/min

⁶ Yield

⁷ 80*10*3 sp=62mm

⁸ 80*10*3

⁹ 120*10*4 mm

¹⁰ Approximate maximum

¹¹ Short-Time

