LEXAN™ Resin 141R - Americas

Polycarbonate

SABIC

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Technical Data

Product Description

LEXAN™ 141R resin is a 11 MFR polycarbonate, MVR of 12. Mold release. UL94 HB rated.

General

Material Status	• Commercial: Active		
Literature [1]	• Processing - Extrusion Blow Molding (English) • Processing - Lexan (English)		
UL Yellow Card [2]	• E121562-220861		
Search for UL Yellow Card	• SABIC • LEXAN™ Resin		
Availability	• Latin America	• North America	
Uses	• Additive • Aerospace Applications • Appliances • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts • Automotive Lighting • Construction Applications • Decorative Parts • Electrical Parts	• Electrical/Electronic Applications • Electronic Displays • Glazing • Heavy Transportation • Industrial Applications • Lawn & Garden Equipment • Lighting Applications • Material Handling • Medical/Healthcare Applications • Military/Defense Applications	• Non-specific Food Applications • Optical Applications • Outdoor Applications • Personal Care • Rail Applications • Recreational Vehicle Applications • Sporting Goods • Surgical Instruments • Water Management
Multi-Point Data	• Coefficient of Thermal Expansion vs. Temperature (ASTM E831) • Compressive Stress vs. Strain (ASTM D6641) • Flexural DMA (ASTM D5023) • 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	• Europe	

Physical		Nominal Value	Unit	Test Method
Density / Specific Gravity	• •	1.20 1.19	g/cm³	ASTM D792
Specific Volume		0.830	cm³/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 [4]		ASTM D638
Yield	62.0 MPa	
Break	68.0 MPa	
Tensile Elongation [4]		ASTM D638
Yield	7.0 %	
Break	130 %	
Flexural Modulus [5] (50.0 mm Span)	2340 MPa	ASTM D790
Flexural Strength [5] (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, Total Energy	63.0 J	
Gardner Impact (23°C)	169 J	ASTM D3029
Tensile Impact Strength [6]	577 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	137 °C	
1.8 MPa, Unannealed, 6.40 mm	132 °C	
Vicat Softening Temperature	154 °C	ASTM D1525 [7]
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) [8]	PLC 1	UL 746A

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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
Glow Wire Flammability Index (1.0 mm)	850	°C	IEC 60695-2-12
Radiant Panel Listing [9]	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] 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 A (50°C/h), Loading 2 (50 N)

[8] Surface

[9] UL Tested

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Where to Buy

Supplier

SABIC
Web: http://www.sabic.com/

Distributor

Bamberger Amco Polymers
Telephone: 800-262-6685
Web: https://bapolymers.com/
Availability: North America

Bamberger Polymers, Inc.
Bamberger Polymers is a global distribution company. Contact Bamberger Polymers for availability of individual products by country.
Telephone: 516-622-3600
Web: http://www.bambergerpolymers.com/
Availability: Canada, Mexico, United States

Conventus Polymers
Telephone: 973-343-7669
Web: http://www.conventuspolymers.com/
Availability: North America

Entec Polymers
Telephone: 833-319-0299
Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec%201&utm_term=ul%20%7C%20where%20to%20buy
Availability: North America

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Telephone: 833-446-3936
Web: https://www.nexeoplastics.com/
Availability: North America

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