

LEXAN™ 244R resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN 244R resin grade is a medium viscosity multi purpose product with improved flame resistance and release properties. It is also FDA food contact compliant available in limited colors.

General Information			
UL YellowCard	E207780-100890184		
Features	Flame Retardant		
	Food Contact Acceptable		
	Good Mold Release		
	Medium Viscosity		
Agency Ratings	FDA Food Contact, Unspecified Rating		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.20	g/cm ³	
--	1.19	g/cm ³	
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	0.15	%	
Equilibrium, 23°C	0.35	%	
Equilibrium, 100°C	0.58	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.0	MPa	
Break	68.0	MPa	
Tensile Elongation ²			ASTM D638
Yield	7.0	%	
Break	130	%	
Flexural Modulus ³ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	96.0	MPa	ASTM D790

Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	ASTM D1044
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
Gardner Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength ⁵	577	kJ/m ²	ASTM D1822
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 746
RTI Imp	130	°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)	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.17		
60 Hz	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 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.47 mm	V-2		
5.99 mm	V-0		
Oxygen Index	25	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003

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

NOTE

- | | |
|----|------------------------------------|
| 1. | Type I, 50 mm/min |
| 2. | Type I, 50 mm/min |
| 3. | 1.3 mm/min |
| 4. | 1.3 mm/min |
| 5. | Type S |
| 6. | Rate B (120°C/h), Loading 2 (50 N) |

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