

LEXAN™ GLX143 resin

Polycarbonate

SABIC Innovative Plastics Europe

Message:

LEXAN GLX resin is a medium viscosity grade which is an excellent candidate for applications with high optical quality requirements, such as automotive glazing applications. Available in transparent clear (automotive glazing colors under development).

General Information			
Features	Medium Viscosity		
Uses	Automotive Applications		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
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 ¹	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	65.0	MPa	
Break	70.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
Break	120	%	
Flexural Modulus ²	2300	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	14	kJ/m ²	
23°C	73	kJ/m ²	
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength ⁵			ISO 180/1A
-30°C	12	kJ/m ²	
23°C	70	kJ/m ²	

Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 100 mm Span ⁷	136	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span ⁸	125	°C	ISO 75-2/Ae
1.8 MPa, Unannealed, 64.0 mm Span ⁹	124	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	142	°C	ISO 306/B50
--	143	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ISO 11359-2
Flow : 23 to 80°C	7.0E-5	cm/cm/°C	
Transverse : 23 to 80°C	7.0E-5	cm/cm/°C	
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
Electric Strength			IEC 60243-1
1.00 mm ¹⁰	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		
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (1.00 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			ASTM D1003
3000 µm	89.0	%	
4000 µm	88.0	%	
5000 µm	87.0	%	
6000 µm	86.0	%	
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
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

NOTE

1.	Tensile Bar
2.	2.0 mm/min
3.	80*10*3 sp=62mm
4.	80*10*3 sp=62mm
5.	80*10*3
6.	80*10*3
7.	120*10*4 mm
8.	120*10*4 mm
9.	80*10*4 mm
10.	Short-Time

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