

LEXAN™ EXRL2032 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN EXRL2032 is a flame retardant transparent polycarbonate featuring non brominated and non chlorinated FR system with good flow and thin wall FR performance. It intended to meet WEEE/RoHS requirements for various applications.

General Information			
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Flow		
Uses	Thin-walled Parts		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80	%	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			
-- ¹	2300	MPa	ASTM D638
--	2230	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	62.0	MPa	ASTM D638
Yield	62.0	MPa	ISO 527-2/50
Break ³	65.0	MPa	ASTM D638
Break	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	85	%	ASTM D638
Break	77	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2160	MPa	ASTM D790

-- ⁷	2250	MPa	ISO 178
Flexural Stress			
--	95.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	95.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	760	J/m	ASTM D256
23°C ⁹	70	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	70.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	136	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	125	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	125	°C	ISO 75-2/Af
Vicat Softening Temperature	142	°C	ASTM D1525 ¹²
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831
Flow : -40 to 40°C	6.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.7E-5	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-0		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	850	°C	
1.50 mm	850	°C	
Optical	Nominal Value	Unit	Test Method
Transmittance (2000 µm)	89.0	%	Internal Method
Haze (2000 µm)	1.0	%	Internal Method
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.	5.0 mm/min	
2.	Type I, 50 mm/min	
3.	Type I, 50 mm/min	
4.	Type I, 50 mm/min	
5.	Type I, 50 mm/min	
6.	1.3 mm/min	
7.	2.0 mm/min	
8.	1.3 mm/min	
9.	80*10*3	
10.	80*10*4 mm	
11.	80*10*4 mm	
12.	Rate B (120°C/h), Loading 2 (50 N)	

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