

LEXAN™ EXL1132T resin

Polycarbonate

SABIC Innovative Plastics

UPMold PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

LEXAN EXL1132T polycarbonate (PC) siloxane copolymer resin is a UV stabilized transparent injection molding (IM) grade with extra release properties. This resin offers good low temperature (-20 C) ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins. LEXAN EXL1132T resin is a general purpose product available in transparent and opaque colors and may be an excellent candidate for a broad range of applications.

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E121562-100983840
Search for UL Yellow Card	• SABIC Innovative Plastics • LEXAN™
Availability	• North America
Additive	• Mold Release • UV Stabilizer
Features	• Copolymer • Ductile • Fast Molding Cycle • Good Processability • High Flow
Appearance	• Clear/Transparent • Opaque
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Specific Gravity	1.19 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	19.0 cm ³ /10min	ISO 1133
Molding Shrinkage		Internal Method
Flow : 3.20 mm	0.40 to 0.80 %	
Across Flow : 3.20 mm	0.40 to 0.80 %	
Water Absorption		ISO 62
Saturation, 23°C	0.12 %	
Equilibrium, 23°C, 50% RH	0.090 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus		
-- ⁴	2260 MPa	ASTM D638
--	2340 MPa	ISO 527-2/1
Tensile Strength		
Yield ⁵	58.6 MPa	ASTM D638
Yield	57.8 MPa	ISO 527-2/50
Break ⁵	57.1 MPa	ASTM D638
Break	56.8 MPa	ISO 527-2/50
Tensile Elongation		
Yield ⁵	5.7 %	ASTM D638
Yield	5.4 %	ISO 527-2/50
Break ⁵	120 %	ASTM D638
Break	120 %	ISO 527-2/50
Flexural Modulus		
50.0 mm Span ⁶	2250 MPa	ASTM D790
-- ⁷	2150 MPa	ISO 178
Flexural Stress		
-- ^{7,8}	89.5 MPa	ISO 178
Yield, 50.0 mm Span ⁶	94.8 MPa	ASTM D790



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Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ⁹		ISO 179/1eA
-30°C	45 kJ/m ²	
23°C	65 kJ/m ²	
Charpy Unnotched Impact Strength ⁹		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact		
-30°C	620 J/m	ASTM D256
23°C	740 J/m	ASTM D256
-30°C ¹⁰	40 kJ/m ²	ISO 180/1A
23°C ¹⁰	55 kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹⁰		ISO 180/1U
-30°C	No Break	
23°C	No Break	
Instrumented Dart Impact		ASTM D3763
23°C, Total Energy	74.9 J	
Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (L-Scale)	89	ISO 2039-2
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		
1.8 MPa, Unannealed, 3.20 mm	122 °C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	117 °C	ISO 75-2/Af
Vicat Softening Temperature		
--	139 °C	ASTM D1525 ¹² ISO 306/B50 ¹²
--	140 °C	ISO 306/B120
Ball Pressure Test (125°C)	Pass	IEC 60695-10-2
CLTE		
Flow : -40 to 95°C	7.5E-5 cm/cm/°C	ASTM E831
Flow : 23 to 80°C	7.5E-5 cm/cm/°C	ISO 11359-2
Transverse : -40 to 95°C	7.6E-5 cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.6E-5 cm/cm/°C	ISO 11359-2
RTI Elec	130 °C	UL 746
RTI Str	130 °C	UL 746
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	ASTM D257
Volume Resistivity	> 1.0E+15 ohms·cm	ASTM D257
Flammability	Nominal Value Unit	Test Method
Flame Rating (1.50 mm)	HB	UL 94
Glow Wire Flammability Index (3.00 mm)	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature		IEC 60695-2-13
0.800 mm	850 °C	
3.00 mm	850 °C	
Optical	Nominal Value Unit	Test Method
Transmittance (2540 μm)	82.0 %	ASTM D1003
Haze (2540 μm)	3.0 %	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 %	

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Injection	Nominal Value Unit
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	71.0 to 93.0 °C
Back Pressure	0.345 to 0.689 MPa
Screw Speed	40 to 70 rpm
Vent Depth	0.025 to 0.076 mm

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 50 mm/min

⁵ Type I, 50 mm/min

⁶ 1.3 mm/min

⁷ 2.0 mm/min

⁸ Yield

⁹ 80*10*3 sp=62mm

¹⁰ 80*10*3

¹¹ 80*10*4 mm

¹² Rate A (50°C/h), Loading 2 (50 N)



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Where to Buy

Supplier

SABIC Innovative Plastics

Pittsfield, MA USA

Telephone: 800-845-0600

Web: <http://www.sabic-ip.com/>

Distributor

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Telephone: 888-594-6009

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Availability: North America

