

LEXAN™ EXL1182T resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN EXL1182T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, enhanced release transparent injection molding (IM) grade. 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 EXL1182T resin is a UV stabilized, enhanced release product available in transparent and opaque colors and may be an excellent candidate for a broad range of applications.

General Information			
Additive	Mold Release		
	UV Stabilizer		
Features	Copolymer		
	Ductile		
	Fast Molding Cycle		
	Good Processability		
	High Flow		
Uses	General Purpose		
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 - Flow (3.20 mm)	0.40 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.24	%	
Equilibrium, 23°C, 50% RH	0.093	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2260	MPa	ASTM D638
--	2340	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	58.6	MPa	ASTM D638
Yield	57.8	MPa	ISO 527-2/50
Break ³	57.1	MPa	ASTM D638

Break	56.8	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	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			
--	89.5	MPa	ISO 178
Yield, 50.0 mm Span ⁸	94.8	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	18	kJ/m ²	
23°C	61	kJ/m ²	
Notched Izod Impact			
-30°C	620	J/m	ASTM D256
23°C	740	J/m	ASTM D256
-30°C ¹⁰	24	kJ/m ²	ISO 180/1A
23°C ¹¹	47	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	74.9	J	ASTM D3763
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 ¹²	117	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	139	°C	ASTM D1525, ISO 306/B50 ¹¹ ¹³
--	140	°C	ISO 306/B120
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
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.	50 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*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate A (50°C/h), Loading 2 (50 N)

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