

LEXAN™ SLX1431D resin

Polycarbonate
SABIC Innovative Plastics

Message:
Medium viscosity PC copolymer with enhanced UV stabilization and added release agent. Available in diffusion colors.

General Information			
UL YellowCard	E121562-537584		
Additive	Mold Release		
Features	Copolymer		
	Good UV Resistance		
	Medium Viscosity		
Appearance	Translucent		
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) (200°C/3.8 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	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			
-- ¹	2360	MPa	ASTM D638
--	2300	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	65.0	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/50
Break ³	73.0	MPa	ASTM D638
Break	70.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.4	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	> 100	%	ASTM D638
Break	> 100	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2450	MPa	ASTM D790

-- ⁷	2450	MPa	ISO 178
Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0 mm Span ⁸	100	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	15	kJ/m ²	
23°C	65	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰ (23°C)	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	100	J/m	ASTM D256
23°C	430	J/m	ASTM D256
-30°C ¹¹	10	kJ/m ²	ISO 180/1A
23°C ¹²	65	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³ (23°C)	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	80.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	134	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	122	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	149	°C	ASTM D1525 ¹⁵
--	137	°C	ISO 306/B50
--	139	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.3E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.3E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.750 mm, Testing by SABIC	HB		
3.00 mm, Testing by SABIC	HB		
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 sp=62mm	
10.	80*10*3 sp=62mm	
11.	80*10*3	
12.	80*10*3	
13.	80*10*3	
14.	80*10*4 mm	
15.	Rate B (120°C/h), Loading 2 (50 N)	

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