

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			
Additive	demoulding		
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 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.35	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
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
Fracture ³	73.0	MPa	ASTM D638
Fracture	70.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.4	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Fracture ⁵	> 100	%	ASTM D638
Fracture	> 100	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁶	2450	MPa	ASTM D790
-- ⁷	2450	MPa	ISO 178

Flexural Stress			
--	100	MPa	ISO 178
Yield, 50.0mm 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	ISO 179/1eA
23°C	65	kJ/m ²	ISO 179/1eA
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, 3.20mm	134	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm 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
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	6.3E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	6.3E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.750 mm, Testing by SABIC	HB		UL 94
3.00 mm, Testing by SABIC	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	260 - 280	°C	
Middle Temperature	270 - 290	°C	
Front Temperature	280 - 310	°C	
Nozzle Temperature	270 - 290	°C	
Processing (Melt) Temp	280 - 310	°C	

Mold Temperature	80.0 - 110	°C
NOTE		
1.	5.0 mm/min	
2.	Type 1, 50mm/min	
3.	Type 1, 50mm/min	
4.	Type 1, 50mm/min	
5.	Type 1, 50mm/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.	标准 B (120°C/h), 载荷2 (50N)	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

