

LEXAN™ IR2840 resin

Polycarbonate
SABIC Innovative Plastics

Message:
Low flow polycarbonate resin with mold release. FDA food contact compliant. Available in limited transparent tints, limited package types, and must meet minimum order quantity requirements.

General Information			
UL YellowCard	E121562-220863		
Additive	Mold Release		
Features	Food Contact Acceptable		
	Low Flow		
Agency Ratings	FDA Food Contact, Unspecified Rating		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792, ISO 1183
--	1.19	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			
24 hr	0.15	%	ASTM D570
Saturation, 23°C	0.35	%	ISO 62
Equilibrium, 23°C	0.35	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2310	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	62.0	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Break ³	68.0	MPa	ASTM D638
Break	70.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	140	%	ASTM D638

Break	120	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2340	MPa	ASTM D790
-- ⁷	2300	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	97.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	95	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	140	J/m	ASTM D256
23°C	910	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	65	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Instrumented Dart Impact (23°C, Total Energy)	65.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 6.40 mm	137	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	132	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	124	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	154	°C	ASTM D1525 ¹³
--	144	°C	ISO 306/B50
--	145	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	6.0E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.0E-5	cm/cm/°C	
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	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	%	
Rear Temperature	288 to 310	°C	
Middle Temperature	299 to 321	°C	

Front Temperature	310 to 332	°C
Nozzle Temperature	304 to 327	°C
Processing (Melt) Temp	310 to 332	°C
Mold Temperature	82.2 to 116	°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.	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*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	Rate B (120°C/h), Loading 2 (50 N)

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