

LEXAN™ IR2040 resin

Polycarbonate
SABIC Innovative Plastics

Message:
Mid-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			
Additive	Mold Release		
Features	Food Contact Acceptable		
	Medium Flow		
Agency Ratings	FDA Food Contact, Unspecified Rating		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	21.0	cm³/10min	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	2380	MPa	ASTM D638
--	2350	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	62.1	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/50
Break ³	68.9	MPa	ASTM D638
Break	65.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	7.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break ⁵	130	%	ASTM D638
Break	100	%	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	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	690	J/m	ASTM D256
23°C ⁹	12	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	125	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁰	122	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	154	°C	ASTM D1525 ¹¹
--	141	°C	ISO 306/B120
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
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	260 to 282	°C	
Middle Temperature	271 to 293	°C	
Front Temperature	282 to 304	°C	
Nozzle Temperature	277 to 299	°C	
Processing (Melt) Temp	282 to 304	°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		
10.	120*10*4 mm		
11.	Rate B (120°C/h), Loading 2 (50 N)		

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