

LEXAN™ 4251R resin

Polycarbonate + PPC

SABIC Innovative Plastics

Message:

High heat polycarbonate copolymer blend with an excellent balance of heat resistance, processability, and impact strength. Available in a range of opaque colors.

General Information			
Features	Copolymer		
	Good Processability		
	High Heat Resistance		
	High Impact Resistance		
Appearance	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.20	g/cm ³	ASTM D792
--	1.10	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.6	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	31.4	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.24	%	
Equilibrium, 23°C, 50% RH	0.090	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2180	MPa	ASTM D638
--	2160	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	64.4	MPa	ASTM D638
Yield	62.6	MPa	ISO 527-2/50
Break ³	63.7	MPa	ASTM D638
Break	59.3	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	6.7	%	ASTM D638
Yield	6.6	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638

Break	96	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2230	MPa	ASTM D790
-- ⁷	2040	MPa	ISO 178
Flexural Stress			
--	7.50	MPa	ISO 178
Yield, 50.0 mm Span ⁸	101	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	48	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	330	J/m	ASTM D256
23°C	640	J/m	ASTM D256
-30°C ¹⁰	21	kJ/m ²	ISO 180/1A
23°C ¹¹	44	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	78.1	J	
23°C, Total Energy	75.3	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	136	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	135	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	156	°C	ASTM D1525, ISO 306/B50 ¹³
--	157	°C	ISO 306/B120
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	6.2E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.7E-5	cm/cm/°C	
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.	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 B (120°C/h), Loading 2 (50 N)	

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