

LEXAN™ ML5221 resin

Polycarbonate

SABIC Innovative Plastics

Message:

Linear, high flow polycarbonate homopolymer resin. Available only in color 111N, limited package types, and must meet minimum order quantity requirement. External sale requires prior approval of Product Management.

General Information			
Features	High Flow		
	Homopolymer		
	Linear Polymer Structure		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.20	g/cm ³	
--	1.19	g/cm ³	
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	25	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			ASTM D570
Equilibrium, 23°C	0.35	%	
Equilibrium, 100°C	0.58	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.0	MPa	
Break	65.0	MPa	
Tensile Elongation ² (Break)	> 70	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2300	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	93.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	640	J/m	ASTM D256
Unnotched Izod Impact (23°C)	No Break		ASTM D4812
Instrumented Dart Impact (23°C, Energy at Peak Load)	54.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	137	°C	
1.8 MPa, Unannealed, 6.40 mm	126	°C	
Vicat Softening Temperature	138	°C	ASTM D1525 ⁵
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Optical	Nominal Value	Unit	Test Method

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	249 to 271	°C	
Middle Temperature	260 to 282	°C	
Front Temperature	271 to 293	°C	
Nozzle Temperature	266 to 288	°C	
Processing (Melt) Temp	271 to 293	°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.	Type I, 50 mm/min		
2.	Type I, 50 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	Rate B (120°C/h), Loading 2 (50 N)		

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