

LEXAN™ ML7647K resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Non FR Impact modified PC, excellent Fatigue performance with balanced Flow and impact. Available in Opaque only

General Information			
UL YellowCard	E207780-100858212		
Additive	Impact Modifier		
Features	Fatigue Resistant		
	Good Flow		
	Good Impact Resistance		
	Impact Modified		
Appearance	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	11.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.26	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2180	MPa	ASTM D638
--	2150	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	52.0	MPa	ASTM D638
Yield	52.0	MPa	ISO 527-2/50
Break ³	54.0	MPa	ASTM D638
Break	50.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.3	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	94	%	ISO 527-2/50
Flexural Modulus			

50.0 mm Span ⁶	2130	MPa	ASTM D790
-- ⁷	2160	MPa	ISO 178
Flexural Stress			
--	86.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	87.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	60	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	720	J/m	ASTM D256
23°C	770	J/m	ASTM D256
-30°C ¹⁰	45	kJ/m ²	ISO 180/1A
23°C ¹¹	57	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	69.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	118	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹²	119	°C	ISO 75-2/Af
Vicat Softening Temperature	138	°C	ASTM D1525, ISO 306/B50, ISO 306/B120 ¹³
CLTE			
Flow : -40 to 40°C	6.9E-5	cm/cm/°C	ASTM E831
Flow : -40 to 40°C	7.1E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Transverse : -40 to 40°C	7.5E-5	cm/cm/°C	ISO 11359-2
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	271 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Nozzle Temperature	288 to 310	°C	
Processing (Melt) Temp	293 to 316	°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 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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