LEXAN™ ML2010 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN ML2010 is an injection moulding grade especially designed for manufacturing optical parts requiring excellent flow properties combined with very high transmission and color stability.

General Information			
Features	Good Color Stability High Flow High Light Transmission		
Uses	Optical Applications		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.20	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/1.2 kg	6.00	cm³/10min	
300°C/1.2 kg	35.0	cm³/10min	
Molding Shrinkage - Flow [1]	0.50 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness (H 358/30)	95.0	MPa	ISO 2039-1
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2350	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	61.0	MPa	
Break	64.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
Break	75	%	
Flexural Modulus [2]	2300	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	Internal Method
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [3]			ISO 179/1eA
-30°C	11	kJ/m²	
23°C	55	kJ/m²	

Charpy Unnotched Impact Strength [4]			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength [5]			ISO 180/1A
-30°C	14	kJ/m²	
23°C	57	kJ/m²	
Unnotched Izod Impact Strength [6]			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature [7]			
0.45 MPa, Unannealed, 100 mm Span	133	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	122	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	144	°C	ISO 306/B50
--	145	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE - Flow (23 to 80°C)	7.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	125	°C	UL 746
RTI Str	125	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.70		
60 Hz	2.70		
1 MHz	2.70		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
60 Hz	1.0E-3		
1 MHz	0.010		
Comparative Tracking Index	250	V	IEC 60112
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.586		ISO 489
Transmittance			
2540 µm	> 90.0	%	ASTM D1003
2540 µm, 420 nm	> 88.0	%	Internal Method
5000 µm	> 89.0	%	Internal Method
Haze (2540 µm)	< 0.50	%	ASTM D1003

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	60.0 to 80.0	°C
Rear Temperature	260 to 280	°C
Middle Temperature	270 to 290	°C
Front Temperature	280 to 300	°C
Nozzle Temperature	270 to 290	°C
Processing (Melt) Temp	280 to 300	°C
Mold Temperature	80.0 to 100	°C

NOTE	
1.	Tensile Bar
2.	2.0 mm/min
3.	80*10*3 sp=62mm
4.	80*10*3 sp=62mm
5.	80*10*3
6.	80*10*3
7.	120*10*4 mm

Recommended distributors for this material

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