

LEXAN™ ML7682 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

LEXAN ML7682 resin is a flame retardant polycarbonate blend featuring high flow, good processability, good impact, good heat resistance, and UV stability. It is of non-chlorine and non-bromine flame retardant systems with UL-94 listing of V0 and 5V. LEXAN ML7682 resin offers limited opaque colors for aesthetics needs.

General Information			
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Impact Resistance		
	Good Processability		
	Good UV Resistance		
	High Flow		
	Medium Heat Resistance		
	Pleasing Surface Appearance		
Appearance	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.22	g/cm ³	ASTM D792
--	1.21	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.60 to 0.80	%	
Across Flow : 3.20 mm	0.60 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.36	%	
Equilibrium, 23°C, 50% RH	0.17	%	
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2500	MPa	ASTM D638
--	2460	MPa	ISO 527-2/1

Tensile Strength			
Yield ²	60.0	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/50
Break ³	59.0	MPa	ASTM D638
Break	57.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.6	%	ASTM D638
Yield	5.3	%	ISO 527-2/50
Break ⁵	93	%	ASTM D638
Break	91	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2400	MPa	ASTM D790
-- ⁷	2430	MPa	ISO 178
Flexural Stress			
--	90.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	89.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	16	kJ/m ²	
23°C	62	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	130	kJ/m ²	
23°C	130	kJ/m ²	
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	760	J/m	ASTM D256
-30°C ¹¹	15	kJ/m ²	ISO 180/1A
23°C ¹²	63	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
-30°C	2100	J/m	ASTM D4812
23°C	2200	J/m	ASTM D4812
-30°C ¹³	180	kJ/m ²	ISO 180/1U
23°C ¹⁴	180	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	62.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	131	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span ¹⁵	132	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	119	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁶	120	°C	ISO 75-2/Ae
Vicat Softening Temperature			

--	138	°C	ASTM D1525, ISO 306/B50 11 ¹⁷
--	141	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	6.4E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	6.7E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	6.8E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.4E-5	cm/cm/°C	ISO 11359-2
RTI Elec	125	°C	UL 746
RTI Imp	110	°C	UL 746
RTI Str	120	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15 to 1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+15 to 1.0E+16	ohms·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
	V-0		
1.80 mm	5VB		
2.50 mm	5VA		
Glow Wire Flammability Index (3.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	850	°C	IEC 60695-2-13
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	266 to 288	°C	
Middle Temperature	277 to 299	°C	
Front Temperature	288 to 310	°C	
Nozzle Temperature	282 to 304	°C	
Processing (Melt) Temp	288 to 310	°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*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	80*10*3
15.	120*10*4 mm
16.	120*10*4 mm
17.	Rate B (120°C/h), Loading 2 (50 N)

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

