

LEXAN™ ML7686 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Transparent Polycarbonate in limited colors. Excellent processability, super high flow. UL rated V-2 at 1.5mm.

General Information			
UL YellowCard	E207780-100240565		
Features	Good Processability		
	High Flow		
Appearance	Clear/Transparent		
	Colors Available		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
260°C/2.16 kg	23	g/10 min	
300°C/1.2 kg	45	g/10 min	
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	43.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.80	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.28	%	
Equilibrium, 23°C, 50% RH	0.35	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2700	MPa	ASTM D638
--	2600	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	70.0	MPa	ASTM D638
Yield	71.0	MPa	ISO 527-2/50
Break ³	70.0	MPa	ASTM D638
Break	61.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.0	%	ASTM D638
Yield	5.0	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	83	%	ISO 527-2/50
Flexural Modulus			

50.0 mm Span ⁶	2470	MPa	ASTM D790
-- ⁷	2530	MPa	ISO 178
Flexural Stress			
--	107	MPa	ISO 178
Yield, 50.0 mm Span ⁸	101	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	5.6	kJ/m ²	
23°C	5.7	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	45	J/m	ASTM D256
23°C	40	J/m	ASTM D256
-30°C ¹¹	5.7	kJ/m ²	ISO 180/1A
23°C ¹²	6.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹³			ISO 180/1U
-30°C	180	kJ/m ²	
23°C	180	kJ/m ²	
Instrumented Dart Impact (23°C, Total Energy)	80.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	94.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	97.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	112	°C	ASTM D1525 ¹⁵
--	111	°C	ISO 306/B50
--	114	°C	ISO 306/B120
CLTE			
Flow : -40 to 40°C	6.6E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	7.2E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	6.7E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.4E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating (1.50 mm, Testing by SABIC)	V-2		UL 94
NOTE			
1.	5.0 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*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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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

