

SABIC LEXAN™ PC ML7682物性表

属性	典型值	UNITS	测试手段
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5.6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	93	%	ASTM D638
Tensile Modulus, 50 mm/min	2500	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	89	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2400	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	57	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.3	%	ISO 527
Tensile Strain, break, 50 mm/min	91	%	ISO 527
Tensile Modulus, 1 mm/min	2460	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2430	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	2150	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	2100	J/m	ASTM D4812
Izod Impact, notched, 23°C	760	J/m	ASTM D256
Izod Impact, notched, -30°C	130	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	62	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	181	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	180	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	63	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	15	kJ/m ²	ISO 180/1A

Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	62	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	16	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	133	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	132	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	138	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, annealed	131	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, annealed	119	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.4E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	6.7E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.4E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	132	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	120	°C	ISO 75/Ae
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	110	°C	UL 746B
Relative Temp Index, Mech w/o impact	120	°C	UL 746B
PHYSICAL			
Specific Gravity	1.22	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.6-0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.6-0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	22	g/10 min	ASTM D1238
Density	1.21	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.36	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.17	%	ISO 62

Melt Volume Rate, MVR at 300°C/1.2 kg	21	cm ³ /10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	10000000000000000-100000000000000000	Ω.cm	ASTM D257
Surface Resistivity	1.E+15-1.E+16	Ω	ASTM D257
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	1.8	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	2.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	1.8	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
UV-light, water exposure/immersion	F1	-	UL 746C
Injection Molding			
Drying Temperature	120	°C	
Drying Time	3-4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290-310	°C	
Nozzle Temperature	280-305	°C	
Front - Zone 3 Temperature	290-310	°C	
Middle - Zone 2 Temperature	275-300	°C	
Rear - Zone 1 Temperature	265-290	°C	
Mold Temperature	70-95	°C	
Back Pressure	0.3-0.7	MPa	
Screw Speed	40-70	rpm	
Shot to Cylinder Size	40-60	%	
Vent Depth	0.025-0.076	mm	

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