

# SABIC Innovative Plastics Lexan® 500ECR PC

## Polymer, Thermoplastic, Polycarbonate (PC)

### SABIC Innovative Plastics (GE Plastics)

#### 产品说明

Lexan® 500ECR Polycarbonate (PC) resin is a 10% glass fiber filled, injection moldable grade. It is of non-chlorinated & non-brominated flame retardant systems with UL-94 V0 rating at 2.3mm. It is available in various opaque color options designed for applications requiring improved stiffness.

物理性能	额定值 (公制)	额定值 (英制)	测试方法
比重	1.27 g/cc	1.27 g/cc	ASTM D792
密度	1.25 g/cc	0.0452 lb/in <sup>3</sup>	ISO 1183
水分吸收	0.130 %	0.130 %	23°C / 50% RH; ISO 62
饱和吸水率	0.31 %	0.31 %	ISO 62
线性成型收缩率, Flow	0.0040 - 0.0060 cm/cm @ Thickness 3.20 mm	0.0040 - 0.0060 in/in @ Thickness 0.126 in	SABIC Method
线性成型收缩率, 横向	0.0040 - 0.0060 cm/cm @ Thickness 3.20 mm	0.0040 - 0.0060 in/in @ Thickness 0.126 in	SABIC Method
熔体流动速率	7.5 g/10 min @ Load 1.20 kg, Temperature 300 °C	7.5 g/10 min @ Load 2.65 lb, Temperature 572 °F	ASTM D1238
化合物熔体指数	7.0 g/10 min @ Load 1.20 kg, Temperature 300 °C	7.0 g/10 min @ Load 2.65 lb, Temperature 572 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133
机械性能	额定值 (公制)	额定值 (英制)	测试方法
硬度, H358/30	115 MPa	16700 psi	ISO 2039-1
抗张强度(断裂)	45.0 MPa	6530 psi	5 mm/min; ISO 527
	48.0 MPa	6960 psi	Type I, 5 mm/min; ASTM D638
抗张强度(屈服)	57.0 MPa	8270 psi	Type I, 5 mm/min; ASTM D638
	60.0 MPa	8700 psi	5 mm/min; ISO 527
伸长率 (断裂)	7.0 %	7.0 %	5 mm/min; ISO 527
	46 %	46 %	Type I, 5 mm/min; ASTM D638
屈服伸长率	4.7 %	4.7 %	Type I, 5 mm/min; ASTM D638
	5.0 %	5.0 %	5 mm/min; ISO 527
拉伸模量	2.46 GPa	357 ksi	5 mm/min; ASTM D638
	3.30 GPa	479 ksi	1 mm/min; ISO 527
弯曲强度	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D790
	95.0 MPa	13800 psi	2 mm/min; ISO 178
弯曲模量	3.12 GPa	453 ksi	1.3 mm/min, 50 mm span; ASTM D790
	3.40 GPa	493 ksi	2 mm/min; ISO 178
悬壁梁缺口冲击强度	1.34 J/cm	2.51 ft-lb/in	ASTM D256
	1.00 J/cm @ Temperature -30.0 °C	1.87 ft-lb/in @ Temperature -22.0 °F	ASTM D256
悬壁梁无缺口冲击强度	NB @ Thickness 6.40 mm	NB @ Thickness 0.252 in	ASTM D4812
悬壁梁缺口冲击强度	10.0 kJ/m <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	80°10°3; ISO 180/1A
	8.00 kJ/m <sup>2</sup> @ Temperature -30.0 °C	3.81 ft-lb/in <sup>2</sup> @ Temperature -22.0 °F	80°10°3; ISO 180/1A
悬壁梁无缺口冲击强度	NB	NB	80°10°3; ISO 180/1U
	NB	NB	80°10°4; ISO 180/1U
	130 kJ/m <sup>2</sup> @ Temperature -30.0 °C	61.9 ft-lb/in <sup>2</sup> @ Temperature -22.0 °F	80°10°3; ISO 180/1U
	NB @ Temperature -30.0 °C	NB @ Temperature -22.0 °F	80°10°4; ISO 180/1U
简支梁无缺口冲击强度	NB	NB	Edgew 80°10°4 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80°10°3 sp=62mm; ISO 179/1eU
	NB @ Temperature -30.0 °C	NB @ Temperature -22.0 °F	Edgew 80°10°3 sp=62mm; ISO 179/1eU

	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
简支梁缺口冲击强度	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cm <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	ISO 179/2C
	0.900 J/cm <sup>2</sup> @Temperature -30.0 °C	4.28 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
落锤总能量	61.0 J @Temperature 23.0 °C	45.0 ft-lb @Temperature 73.4 °F	ASTM D3763
泰伯磨损,毫克/1000次	11	11	CS-17, 1 kg; SABIC Method
<b>电气性能</b>	<b>额定值 (公制)</b>	<b>额定值 (英制)</b>	<b>测试方法</b>
体积电阻率	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
表面电阻	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
介电常数	2.8 @Frequency 1.00e+6 Hz	2.8 @Frequency 1.00e+6 Hz	IEC 60250
	2.9 @Frequency 50.0 - 60.0 Hz	2.9 @Frequency 50.0 - 60.0 Hz	IEC 60250
介电强度	16.0 kV/mm @Thickness 3.20 mm	406 kV/in @Thickness 0.126 in	in oil; IEC 60243-1
	25.0 kV/mm @Thickness 1.60 mm	635 kV/in @Thickness 0.0630 in	in oil; IEC 60243-1
	33.0 kV/mm @Thickness 0.800 mm	838 kV/in @Thickness 0.0315 in	in oil; IEC 60243-1
耗散因数	0.0010 @Frequency 50.0 - 60.0 Hz	0.0010 @Frequency 50.0 - 60.0 Hz	IEC 60250
	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	IEC 60250
相比耐漏电起痕指数(CTI)	150 V	150 V	IEC 60112
	175 - 250 V	175 - 250 V	UL 746A
热丝引燃 (HWI)	7.0 - 15 sec	7.0 - 15 sec	UL 746A
高电弧燃烧,HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
<b>热性能</b>	<b>额定值 (公制)</b>	<b>额定值 (英制)</b>	<b>测试方法</b>
线形热膨胀系数 - 流动	40.0 μm/m-°C @Temperature 23.0 - 80.0 °C	22.2 μin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
	46.8 μm/m-°C @Temperature -40.0 - 40.0 °C	26.0 μin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
线性热膨胀系数,横向流动	84.6 μm/m-°C @Temperature -40.0 - 40.0 °C	47.0 μin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	84.6 μm/m-°C @Temperature -40.0 - 40.0 °C	47.0 μin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
导热系数	0.210 W/m-K	1.46 BTU-in/hr-ft <sup>2</sup> -°F	ISO 8302
载荷下热变形温度(0.46 MPa)	144 °C	291 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	143 °C @Thickness 3.20 mm	289 °F @Thickness 0.126 in	unannealed; ASTM D648
载荷下热变形温度(1.8 MPa)	136 °C	277 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	136 °C	277 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	142 °C	288 °F	Annealed 120°C, 2hrs; ISO 75/Ae
	136 °C @Thickness 3.20 mm	277 °F @Thickness 0.126 in	unannealed; ASTM D648
维卡软化温度	141 °C	286 °F	Rate B/50; ISO 306
	143 °C	289 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D1525
UL RTI	130 °C	266 °F	UL 746B
UL RTI,机械冲击	130 °C	266 °F	UL 746B