

LEXAN* PC1800R Resin

聚碳酸酯

SABIC Innovative Plastics Asia Pacific



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Technical Data

产品说明

PC1800R resin is a medium-high flow (MFR = 18 at 300°C/1.2kg), heat stabilized, polycarbonate product with mold release designed for use in the general purpose molding market. It is available exclusively at www.sabicpc.com

总体

材料状态	• 已商用：当前有效
供货地区	• 亚太地区
添加剂	• 热稳定剂 • 脱模
性能特点	• 流动性中等 • 热稳定性
用途	• 一般目的
加工方法	• 注射成型

物理性能	额定值 单位制	测试方法
比重	1.20 g/cm ³	ASTM D792 ISO 1183
熔流率 (300°C/1.2 kg)	18 g/10 min	ASTM D1238
溶化体积流率 (MVR) (300°C/1.2 kg)	17.0 cm ³ /10min	ISO 1133
收缩率 - 流动 -- ²	0.50 到 0.70 %	Internal Method
3.20 mm	0.50 到 0.70 %	
吸水率 饱和, 23°C	0.35 %	ISO 62
平衡, 23°C	0.35 %	ASTM D570

机械性能	额定值 单位制	测试方法
拉伸模量 -- ³	2350 MPa	ASTM D638
--	2350 MPa	ISO 527-2/1
抗张强度 屈服 ⁴	63.0 MPa	ASTM D638
屈服	63.0 MPa	ISO 527-2/50
伸长率 屈服 ⁴	6.0 %	ASTM D638
屈服	6.0 %	ISO 527-2/50
断裂 ⁴	> 70 %	ASTM D638
断裂	> 70 %	ISO 527-2/50
弯曲模量 50.0 mm 跨距 ⁵	2300 MPa	ASTM D790
-- ⁶	2300 MPa	ISO 178
弯曲强度 -- ^{6,7}	90.0 MPa	ISO 178
屈服, 50.0 mm 跨距 ⁵	90.0 MPa	ASTM D790

冲击性能	额定值 单位制	测试方法
悬臂梁缺口冲击强度 23°C	700 J/m	ASTM D256
-30°C ⁸	12 kJ/m ²	ISO 180/1A
23°C ⁸	70 kJ/m ²	ISO 180/1A
无缺口悬臂梁冲击 23°C	无断裂	ASTM D4812 ISO 180/1U
-30°C ⁸	无断裂	ISO 180/1U
装有测量仪表的落镖冲击 (23°C, Energy at Peak Load)	65.0 J	ASTM D3763

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硬度	额定值 单位制	测试方法
洛氏硬度 (R 计秤)	120	ASTM D785 ISO 2039-2
热性能	额定值 单位制	测试方法
热变形温度		
0.45 MPa, 未退火, 3.20 mm	135 °C	ASTM D648
0.45 MPa, 未退火, 64.0 mm 跨距 ⁹	135 °C	ISO 75-2/Bf
1.8 MPa, 未退火, 3.20 mm	124 °C	ASTM D648
1.8 MPa, 未退火, 64.0 mm 跨距 ⁹	124 °C	ISO 75-2/Af
维卡软化温度	141 °C	ISO 306/B50 ASTM D1525 ¹⁰
Ball Pressure Test (125°C)	Pass	IEC 60695-10-2
线形膨胀系数 - 流动		
-40 到 95°C	0.000070 cm/cm/°C	ASTM E831
23 到 80°C	0.000070 cm/cm/°C	ISO 11359-2
导热系数	0.20 W/m/K	ASTM C177 ISO 8302
电气性能	额定值 单位制	测试方法
体积电阻率	> 1.0E+15 ohm·cm	ASTM D257 IEC 60093
介电强度 (1.60 mm)	27 kV/mm	ASTM D149 IEC 60243-1
介电常数		ASTM D150 IEC 60250
60 Hz	3.00	
1 MHz	3.00	
耗散因数		ASTM D150 IEC 60250
60 Hz	0.0010	
1 MHz	0.010	
可燃性	额定值 单位制	测试方法
UL 阻燃等级 (1.60 mm)	V-2	UL 94
光学性能	额定值 单位制	测试方法
折射率	1.586	ASTM D542 ISO 489
透射率 (2540 μm)	88.0 到 90.0 %	ASTM D1003
雾度 (2540 μm)	< 0.80 %	ASTM D1003
注射	额定值 单位制	
干燥温度	120 °C	
干燥时间	2.0 到 4.0 hr	
建议的最大水分含量	0.020 %	
料筒温度	60.0 到 80.0 °C	
螺筒后部温度	260 到 280 °C	
螺筒中部温度	270 到 290 °C	
螺筒前部温度	280 到 300 °C	
射嘴温度	270 到 290 °C	
加工 (熔体) 温度	280 到 300 °C	
模具温度	80.0 到 100 °C	

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备注

¹ 一般属性：这些不能被视为规格。

² Tensile Bar

³ 50 mm/min

⁴ 类型 1, 50 mm/min

⁵ 1.3 mm/min

⁶ 2.0 mm/min

⁷ Yield

⁸ 80*10*3

⁹ 80*10*4 mm

¹⁰ 标准 B (120°C/h), 压力2 (50N)



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