

SABIC® PC RESIN PC5800

REGION ASIA

DESCRIPTION

PC5800 resin is a very high flow (MFR = 8.9 at 250C/1.2kg) polycarbonate product designed for use in the optical media market. It is available exclusively at www.sabicpc.com.

TYPICAL PROPERTY VALUES

Revision 20220619

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	>40	%	ASTM D638
Tensile Modulus, 50 mm/min	2350	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	>40	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
IMPACT			
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	15	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	12	kJ/m ²	ISO 180/1A
THERMAL			
Vicat Softening Temp, Rate B/50	138	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm	132	°C	ASTM D648
HDT, 1.82 MPa, 3.2 mm	122	°C	ASTM D648
CTE, -40°C to 95°C, flow	7.E-05	1/°C	ASTM E831
Thermal Conductivity	0.2	W/m.°C	ASTM C177
Thermal Conductivity	0.2	W/m.°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	132	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Water Absorption, (23°C/Saturated)	0.35	%	ASTM D570
Mold Shrinkage on Tensile Bar, flow	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 250°C/1.2 kgf	8.9	g/10 min	ASTM D1238

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Melt Volume Rate, MVR at 250°C/1.2 kg	8	cm ³ /10 min	ISO 1133
OPTICAL			
Light Transmission, 2.54 mm	>90	%	ASTM D1003
Haze, 2.54 mm	<0.7	%	ASTM D1003
Refractive Index	1.586	-	ASTM D542
Refractive Index	1.586	-	ISO 489
ELECTRICAL			
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Relative Permittivity, 1 MHz	3	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	340 – 370	°C	
Nozzle Temperature	340 – 370	°C	
Front - Zone 3 Temperature	350 – 380	°C	
Middle - Zone 2 Temperature	320 – 340	°C	
Rear - Zone 1 Temperature	270 – 290	°C	
Hopper Temperature	60 – 80	°C	
Mold Temperature	75 – 95	°C	

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