



SABIC® PC RESIN PC5800

REGION EUROPE

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.

TYPICAL PROPERTY VALUES

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/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	12	kJ/m²	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	