

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 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	>40	%	ASTM D 638
Tensile Modulus, 50 mm/min	2350	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D 790
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 D 1525
HDT, 0.45 MPa, 3.2 mm	132	°C	ASTM D 648
HDT, 1.82 MPa, 3.2 mm	122	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.E-05	1/°C	ASTM E 831
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 D 792
Water Absorption, equilibrium, 23C	0.35	%	ASTM D 570
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 D 1238

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.35	%	ISO 62
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 D 1003
Haze, 2.54 mm	<0.7	%	ASTM D 1003
Refractive Index	1.586	-	ASTM D542
Refractive Index	1.586	-	ISO 489
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-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	

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.