

XENOY™ 5720U resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

Unfilled PBT+PC alloy. Outstanding low temperature impact/chemical resistance. UV stabilized version of XENOY

General Information			
UL YellowCard	E121562-100980304		
Additive	UV Stabilizer		
Features	Good Chemical Resistance		
	Low Temperature Impact Resistance		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792, ISO 1183
Specific Volume	0.850	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR)			
250°C/2.16 kg	3.8	g/10 min	ASTM D1238, ISO 1133
250°C/5.0 kg	11	g/10 min	ASTM D1238, ISO 1133
265°C/2.16 kg	6.8	g/10 min	ASTM D1238
266°C/5.0 kg	20	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/2.16 kg	3.60	cm ³ /10min	
250°C/5.0 kg	10.9	cm ³ /10min	
265°C/2.16 kg	6.50	cm ³ /10min	
265°C/5.0 kg	18.9	cm ³ /10min	
Molding Shrinkage - Flow (3.20 mm)	1.0 to 1.2	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.28	%	
Equilibrium, 23°C, 50% RH	0.080	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1830	MPa	ASTM D638
-- ²	1830	MPa	Internal Method
-- ³	1820	MPa	ASTM D638
--	1800	MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	44.0	MPa	ASTM D638
Yield ⁵	45.0	MPa	Internal Method
Yield ⁶	47.0	MPa	ASTM D638

Yield	44.0	MPa	ISO 527-2/5
Yield	47.0	MPa	ISO 527-2/50
Break ⁷	50.0	MPa	ASTM D638
Break ⁸	47.0	MPa	Internal Method
Break ⁹	48.0	MPa	ASTM D638
Break	43.0	MPa	ISO 527-2/5, ISO 527-2/50
Tensile Elongation			
Yield ¹⁰	4.6	%	ASTM D638
Yield ¹¹	4.6	%	Internal Method
Yield ¹²	4.0	%	ASTM D638
Yield	4.1	%	ISO 527-2/5
Yield	4.6	%	ISO 527-2/50
Break ¹³	120	%	ASTM D638
Break ¹⁴	110	%	Internal Method
Break ¹⁵	120	%	ASTM D638
Break	110	%	ISO 527-2/5
Break	120	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ¹⁶	1660	MPa	ASTM D790
-- ¹⁷	1870	MPa	ISO 178
Flexural Stress			
--	71.0	MPa	ISO 178
Yield, 50.0 mm Span ¹⁸	70.0	MPa	ASTM D790
Break, 50.0 mm Span ¹⁹	69.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ²⁰			ISO 179/1eA
-30°C	48	kJ/m ²	
23°C	56	kJ/m ²	
Notched Izod Impact			
-40°C	600	J/m	ASTM D256
-30°C	650	J/m	ASTM D256
-20°C	700	J/m	ASTM D256
-10°C	660	J/m	ASTM D256
0°C	690	J/m	ASTM D256
23°C	720	J/m	ASTM D256
-40°C ²¹	46	kJ/m ²	ISO 180/1A
-30°C ²²	48	kJ/m ²	ISO 180/1A
-20°C ²³	50	kJ/m ²	ISO 180/1A
-10°C ²⁴	52	kJ/m ²	ISO 180/1A
0°C ²⁵	55	kJ/m ²	ISO 180/1A
23°C ²⁶	56	kJ/m ²	ISO 180/1A
Instrumented Dart Impact			ASTM D3763

-40°C, Energy at Peak Load	49.5	J	
-40°C, Total Energy	59.2	J	
-30°C, Energy at Peak Load	49.5	J	
-30°C, Total Energy	61.9	J	
-20°C, Energy at Peak Load	41.9	J	
-20°C, Total Energy	53.2	J	
23°C, Energy at Peak Load	44.8	J	
23°C, Total Energy	54.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	108	°C	ASTM D648
0.45 MPa, Unannealed, 6.40 mm	117	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ²⁷	110	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	83.5	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	95.9	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ²⁸	87.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	120	°C	ASTM D1525, ISO 306/B50 15 ²⁹
--	122	°C	ISO 306/B120
CLTE			
Flow : -40 to 95°C	9.8E-5	cm/cm/°C	ASTM E831
Flow : -30 to 80°C	9.8E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 95°C	1.0E-4	cm/cm/°C	ASTM E831
Transverse : -30 to 80°C	1.0E-4	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	110	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	50 to 80	%	
Rear Temperature	243 to 266	°C	
Middle Temperature	249 to 271	°C	
Front Temperature	254 to 277	°C	
Nozzle Temperature	254 to 271	°C	
Processing (Melt) Temp	260 to 277	°C	
Mold Temperature	65.6 to 87.8	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	50 to 80	rpm	
Vent Depth	0.013 to 0.020	mm	
NOTE			
1.	5.0 mm/min		

2.	10 mm/min
3.	50 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 10 mm/min
6.	Type I, 50 mm/min
7.	Type I, 5.0 mm/min
8.	Type I, 10 mm/min
9.	Type I, 50 mm/min
10.	Type I, 5.0 mm/min
11.	Type I, 10 mm/min
12.	Type I, 50 mm/min
13.	Type I, 5.0 mm/min
14.	Type I, 10 mm/min
15.	Type I, 50 mm/min
16.	1.3 mm/min
17.	2.0 mm/min
18.	1.3 mm/min
19.	1.3 mm/min
20.	80*10*4 sp=62mm
21.	80*10*4
22.	80*10*4
23.	80*10*4
24.	80*10*4
25.	80*10*4
26.	80*10*4
27.	80*10*4 mm
28.	80*10*4 mm
29.	Rate B (120°C/h), Loading 2 (50 N)

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