

XENOY™ 5220U resin

Polycarbonate + PBT

SABIC Innovative Plastics

Message:

Unreinforced PBT+PC Alloy. Impact Modified. Improved retention of mechanical properties under UV exposure. Excellent low temperature impact and chemical resistance.

General Information	
UL YellowCard	E207780-271172
Additive	Impact modifier
Features	Impact modification
	Low temperature impact resistance
	Good chemical resistance
Processing Method	Sheet extrusion molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.21	g/cm ³	ASTM D792
--	1.22	g/cm ³	ISO 1183
Specific Volume	0.830	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/5.0 kg)	16	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (250°C/5.0 kg)	15.0	cm ³ /10min	ASTM D1238, ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.80 - 1.0	%	Internal method
Transverse flow ¹	0.80 - 1.0	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.50	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Outdoor Suitability	f2		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	2250	MPa	ASTM D638
-- ³	2250	MPa	ASTM D638
--	2050	MPa	ISO 527-2/1
Tensile Strength			
Yield ⁴	53.0	MPa	ASTM D638
Yield	50.0	MPa	ISO 527-2/50
Fracture ⁵	51.0	MPa	ASTM D638

Fracture	50.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁶	4.0	%	ASTM D638
Yield	4.0	%	ISO 527-2/50
Fracture ⁷	120	%	ASTM D638
Fracture	120	%	ISO 527-2/50
Flexural Modulus			
50.0mm span ⁸	2030	MPa	ASTM D790
-- ⁹	2000	MPa	ISO 178
Flexural Stress			
--	80.0	MPa	ISO 178
Yield, 50.0mm span ¹⁰	84.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹¹ (23°C)	55	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-40°C	300	J/m	ASTM D256
-30°C	530	J/m	ASTM D256
23°C	710	J/m	ASTM D256
-30°C ¹²	30	kJ/m ²	ISO 180/1A
23°C ¹³	50	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	60.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 6.40mm	107	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	84.0	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	99.0	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁴	75.0	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	122	°C	ASTM D1525 ¹⁵
--	120	°C	ISO 306/B50
--	125	°C	ISO 306/B120
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	9.5E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	9.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
RTI Elec	75.0	°C	UL 746
RTI Imp	75.0	°C	UL 746
RTI	75.0	°C	UL 746
Electrical	Nominal Value	Test Method	
Arc Resistance ¹⁶	PLC 5	ASTM D495	
Comparative Tracking Index (CTI)	PLC 1	UL 746	
High Amp Arc Ignition (HAI)	PLC 0	UL 746	

High Voltage Arc Tracking Rate (HVTR)	PLC 0	UL 746
Hot-wire Ignition (HWI)	PLC 3	UL 746
Flammability	Nominal Value	Test Method
Flame Rating (1.50 mm)	HB	UL 94
Injection	Nominal Value	Unit
Drying Temperature	110	°C
Drying Time	4.0 - 6.0	hr
Drying Time, Maximum	8.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	50 - 80	%
Rear Temperature	243 - 266	°C
Middle Temperature	249 - 271	°C
Front Temperature	254 - 277	°C
Nozzle Temperature	254 - 271	°C
Processing (Melt) Temp	260 - 277	°C
Mold Temperature	65.6 - 87.8	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	50 - 80	rpm
Vent Depth	0.013 - 0.020	mm
Extrusion	Nominal Value	Unit
Drying Temperature	110 - 116	°C
Drying Time	4.0 - 6.0	hr
Suggested Max Moisture	1.0E-3 - 0.020	%
Cylinder Zone 1 Temp.	171 - 204	°C
Cylinder Zone 2 Temp.	193 - 254	°C
Cylinder Zone 3 Temp.	204 - 282	°C
Cylinder Zone 4 Temp.	204 - 282	°C
Adapter Temperature	227 - 282	°C
Melt Temperature	243 - 277	°C
Die Temperature	232 - 282	°C
Extrusion instructions		
Drying Time (Cumulative): 8 hrsRoll Stack Temp - Bottom: 82 - 93 °CRoll Stack Temp - Middle: 77 - 82 °CRoll Stack Temp - Top: 71 - 82 °C		
NOTE		
1.	Tensile Bar	
2.	5.0 mm/min	
3.	50 mm/min	
4.	Type 1, 50mm/min	
5.	Type 1, 50mm/min	
6.	Type 1, 50mm/min	
7.	Type 1, 50mm/min	
8.	1.3 mm/min	
9.	2.0 mm/min	

10.	1.3 mm/min
11.	80*10*4 sp=62mm
12.	80*10*4
13.	80*10*4
14.	80*10*4 mm
15.	标准 B (120°C/h), 载荷2 (50N)
16.	Tungsten electrode

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