

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	E121562-220838		
Additive	Impact modifier		
Features	Impact modification		
	Good UV resistance		
	Low temperature impact resistance		
	Good chemical resistance		
Processing Method	Sheet extrusion molding		
	Injection molding		
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)		
	Compressive Stress vs. Strain (ASTM D695)		
	Elastic Modulus vs Temperature (ASTM D4065)		
	Flexural DMA (ASTM D4065)		
	Pressure-Volume-Temperature (PVT - Zoller Method)		
	Shear DMA (ASTM D4065)		
	Specific Heat vs. Temperature (ASTM D3417)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Thermal Conductivity vs. Temperature (ASTM E1530)		
Viscosity vs. Shear Rate (ASTM D3835)			
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.21	g/cm³	ASTM D792
--	1.22	g/cm³	ISO 1183
Specific Volume	0.830	cm³/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	cm³/10min	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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