

SABIC Innovative Plastics Xenoy® 5720U PBT+PC

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/Polybutylene Terephthalate (PBT) Blend, Unreinforced , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-5720U-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.17 g/cc	1.17 g/cc	ASTM D792
Density	1.17 g/cc	0.0423 lb/in ³	ASTM D792
	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.28 %	0.28 %	ISO 62
Linear Mold Shrinkage, Flow	0.010 - 0.012 cm/cm @Thickness 3.20 mm	0.010 - 0.012 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	3.0 g/10 min @Load 2.16 kg, Temperature 250 Â°C	3.0 g/10 min @Load 4.76 lb, Temperature 482 Â°F	ISO 1133
	3.8 g/10 min @Load 2.16 kg, Temperature 250 Â°C	3.8 g/10 min @Load 4.76 lb, Temperature 482 Â°F	ASTM D1238
	6.0 g/10 min @Load 2.16 kg, Temperature 265 Â°C	6.0 g/10 min @Load 4.76 lb, Temperature 509 Â°F	ASTM D1238
	11 g/10 min @Load 5.00 kg, Temperature 250 Â°C	11 g/10 min @Load 11.0 lb, Temperature 482 Â°F	ISO 1133
	11.4 g/10 min @Load 5.00 kg, Temperature 250 Â°C	11.4 g/10 min @Load 11.0 lb, Temperature 482 Â°F	ASTM D1238
	19.7 g/10 min @Load 5.00 kg, Temperature 266 Â°C	19.7 g/10 min @Load 11.0 lb, Temperature 511 Â°F	ASTM D1238
	3.0 g/10 min	3.0 g/10 min	

Melt Index of Compound Physical Properties	Metric @Load 2.16 kg, Temperature 250 Â°C	English @Load 4.76 lb, Temperature 482 Â°F	MVR [cm^3/10 min]; ISO 1133 Comments
	6.0 g/10 min	6.0 g/10 min	
	@Load 2.16 kg, Temperature 265 Â°C	@Load 4.76 lb, Temperature 509 Â°F	MVR [cm^3/10 min]; ISO 1133
	10 g/10 min	10 g/10 min	
	@Load 5.00 kg, Temperature 250 Â°C	@Load 11.0 lb, Temperature 482 Â°F	MVR [cm^3/10 min]; ISO 1133
	18 g/10 min	18 g/10 min	
	@Load 5.00 kg, Temperature 265 Â°C	@Load 11.0 lb, Temperature 509 Â°F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	43.0 MPa	6240 psi	5 mm/min; ISO 527
	43.0 MPa	6240 psi	50 mm/min; ISO 527
	47.0 MPa	6820 psi	Type I, 10 mm/min; SABIC - Japan Method
	48.0 MPa	6960 psi	Type I, 50 mm/min; ASTM D638
	50.0 MPa	7250 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D638
	44.0 MPa	6380 psi	5 mm/min; ISO 527
	45.0 MPa	6530 psi	Type I, 10 mm/min; SABIC - Japan Method
	47.0 MPa	6820 psi	Type I, 50 mm/min; ASTM D638
	47.0 MPa	6820 psi	50 mm/min; ISO 527
Elongation at Break	106.8 %	106.8 %	5 mm/min; ISO 527
	109.5 %	109.5 %	Type I, 10 mm/min; SABIC - Japan Method
	115.3 %	115.3 %	50 mm/min; ISO 527
	116.6 %	116.6 %	Type I, 50 mm/min; ASTM D638
	122.4 %	122.4 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D638
	4.1 %	4.1 %	5 mm/min; ISO 527
	4.6 %	4.6 %	50 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
			Type I, 1 mm/min; ASTM D638
	4.6 %	4.6 %	Type I, 10 mm/min; SABIC - Japan Method
Tensile Modulus	1.79 GPa	260 ksi	1 mm/min; ISO 527
	1.81 GPa	263 ksi	50 mm/min; ASTM D638
	1.83 GPa	265 ksi	5 mm/min; ASTM D638
	1.83 GPa	265 ksi	10 mm/min; SABIC - Japan Method
Flexural Strength	69.0 MPa	10000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	70.0 MPa	10200 psi	1.3 mm/min, 50 mm span; ASTM D790
	71.0 MPa	10300 psi	2 mm/min; ISO 178
Flexural Modulus	1.66 GPa	241 ksi	1.3 mm/min, 50 mm span; ASTM D790
	1.86 GPa	270 ksi	2 mm/min; ISO 178
Izod Impact, Notched	7.22 J/cm	13.5 ft-lb/in	ASTM D256
	5.98 J/cm	11.2 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.47 J/cm	12.1 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.63 J/cm	12.4 ft-lb/in	ASTM D256
	@Temperature -10.0 °C	@Temperature 14.0 °F	
	6.91 J/cm	12.9 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	6.95 J/cm	13.0 ft-lb/in	ASTM D256
	@Temperature -20.0 °C	@Temperature -4.00 °F	
Izod Impact, Notched (ISO)	55.0 kJ/mÂ²	26.2 ft-lb/inÂ²	80*10*4; ISO 180/1A
	46.0 kJ/mÂ²	21.9 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Mechanical Properties	48.0 kJ/mÂ² Metric	22.8 ft-lb/inÂ² English	Comments 80*10*4, ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	50.0 kJ/mÂ²	23.8 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
	52.0 kJ/mÂ²	24.7 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -10.0 Â°C	@Temperature 14.0 Â°F	
	55.0 kJ/mÂ²	26.2 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
Charpy Impact, Notched	5.50 J/cmÂ²	26.2 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	4.70 J/cmÂ²	22.4 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Dart Drop, Total Energy	44.0 J	32.5 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
	41.0 J	30.2 ft-lb	Instrumented Impact, Energy @ peak, -20Â°C; ASTM D3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
	49.0 J	36.1 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	
	49.0 J	36.1 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	53.0 J	39.1 ft-lb	ASTM D3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
	54.0 J	39.8 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	59.0 J	43.5 ft-lb	ASTM D3763
	@Temperature -40.0 Â°C	@Temperature -40.0 Â°F	
	61.0 J	45.0 ft-lb	

Mechanical Properties	@Temperature -30.0 Metric	@Temperature -22.0 English	ASTM D3763 Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	97.5 Åµm/m-Å°C	54.2 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 95.0 Å°C	@Temperature -40.0 - 203 Å°F	
	97.5 Åµm/m-Å°C	54.2 Åµin/in-Å°F	ISO 11359-2
	@Temperature -30.0 - 80.0 Å°C	@Temperature -22.0 - 176 Å°F	
CTE, linear, Transverse to Flow	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	ASTM E 831
	@Temperature -40.0 - 95.0 Å°C	@Temperature -40.0 - 203 Å°F	

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