

SABIC Innovative Plastics Xenoy® 1731A PBT+PC (Asia Pacific)

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

Material Notes:

PBT+PC, Good Impact , Excellent physical property retention in automotive exteriors and OVAD. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-1731A-PBTPC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.22 g/cc	1.22 g/cc	ASTM D 792
Density	1.22 g/cc	0.0441 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.080 %	0.080 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.28 % @Temperature 23.0 °C	0.28 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0065 - 0.0073 cm/cm @Thickness 3.20 mm	0.0065 - 0.0073 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.0 g/10 min @Load 5.00 kg, Temperature 250 °C	8.0 g/10 min @Load 11.0 lb, Temperature 482 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	9.6 g/10 min @Load 5.00 kg, Temperature 250 °C	9.6 g/10 min @Load 11.0 lb, Temperature 482 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	57.0 MPa	8270 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D 638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
Elongation at Break	104 %	104 %	50 mm/min; ISO 527
	108 %	108 %	Type I, 50 mm/min; ASTM D 638
	240 %	240 %	Type I, 10 mm/min; SABIC - Japan Method

Elongation at Yield Mechanical Properties	5.0 % Metric	5.0 % English	50 mm/min; ISO 527 Comments
	5.6 %	5.6 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.37 GPa	344 ksi	5 mm/min; ASTM D 638
	2.37 GPa	344 ksi	1 mm/min; ISO 527
Flexural Yield Strength	92.0 MPa	13300 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.12 GPa	307 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.21 GPa	321 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.76 J/cm @Temperature -30.0 Â°C	3.30 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	8.14 J/cm @Temperature 23.0 Â°C	15.2 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
	1.60 J/cm @Thickness 6.40 mm, Temperature 23.0 Â°C	3.00 ft-lb/in @Thickness 0.252 in, Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Notched (ISO)	16.0 kJ/mÂ² @Temperature -30.0 Â°C	7.61 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
	59.0 kJ/mÂ² @Temperature 23.0 Â°C	28.1 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	1.30 J/cmÂ² @Temperature -30.0 Â°C	6.19 ft-lb/inÂ² @Temperature -22.0 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	6.50 J/cmÂ² @Temperature 23.0 Â°C	30.9 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	58.0 J @Temperature 23.0 Â°C	42.8 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
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Thermal Properties CTE, linear, Parallel to Flow	83.2 Âµm/m-Â°C Metric	46.2 Âµin/in-Â°F English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	83.2 Âµm/m-Â°C	46.2 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
CTE, linear, Transverse to Flow	83.5 Âµm/m-Â°C	46.4 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	83.5 Âµm/m-Â°C	46.4 Âµin/in-Â°F	ISO 11359-2
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	116 Â°C	241 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	110 Â°C	230 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	120 Â°C	248 Â°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	98.0 Â°C	208 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	92.0 Â°C	198 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	105 Â°C	221 Â°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	130 Â°C	266 Â°F	Rate B/50; ASTM D 1525
	130 Â°C	266 Â°F	Rate B/50; ISO 306
	131 Â°C	268 Â°F	Rate B/120; ISO 306

Descriptive Properties	Value	Comments
Ball Pressure Test, 75Â°C +/- 2Â°C	PASS	IEC 60695-10-2

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