

SABIC Innovative Plastics Xenoy[®] X4830 PBT+PC

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

Material Notes:

Xenoy X4830 is a hydrostable, high modulus, low temperature ductile PC/PBT blend. Furthermore, this resin provides high chemical resistance, very low creep, low CTE, excellent fatigue and high heat dimensional stability. The X4830 could be positioned for body panels, safety equipment, housings, doorhandles, spring-loaded applications, medical device enclosures, outdoor sports equipment.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-X4830-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D792
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183
Moisture Absorption	0.140 %	0.140 %	23 [°] C / 50% RH; ISO 62
Water Absorption at Saturation	0.42 %	0.42 %	ISO 62
Linear Mold Shrinkage, Flow	0.0070 - 0.0090 cm/cm @Thickness 3.20 mm	0.0070 - 0.0090 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	7.0 g/10 min @Load 5.00 kg, Temperature 266 [°] C	7.0 g/10 min @Load 11.0 lb, Temperature 511 [°] F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 5.00 kg, Temperature 265 [°] C	6.0 g/10 min @Load 11.0 lb, Temperature 509 [°] F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	105 MPa	15200 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	Type I, 5 mm/min; ASTM D638
	60.0 MPa	8700 psi	5 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	5 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 5 mm/min; ASTM D638
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638

Mechanical Properties	61.0 MPa Metric	8850 psi English	50 mm/min; ISO 527 Comments
Elongation at Break	110 %	110 %	50 mm/min; ISO 527
	120 %	120 %	5 mm/min; ISO 527
	140 %	140 %	Type I, 50 mm/min; ASTM D638
	150 %	150 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	4.1 %	4.1 %	Type I, 50 mm/min; ASTM D638
	4.1 %	4.1 %	5 mm/min; ISO 527
	4.2 %	4.2 %	50 mm/min; ISO 527
	4.5 %	4.5 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	3.20 GPa	464 ksi	1 mm/min; ISO 527
	3.40 GPa	493 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	96.0 MPa	13900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.90 GPa	421 ksi	2 mm/min; ISO 178
	3.10 GPa	450 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
	1.20 J/cm	2.25 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.50 J/cm	2.81 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Notched (ISO)	45.0 kJ/m ²	21.4 ft-lb/in ²	80*10*4; ISO 180/1A
	9.00 kJ/m ²	4.28 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	15.0 kJ/m ²	7.14 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U

Mechanical Properties	NB Metric	NB English	Comments ID 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	4.00 J/cmÂ²	19.0 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.20 J/cmÂ²	5.71 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	70.0 J	51.6 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	70.0 J	51.6 ft-lb	ASTM D3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
Impact Test	110 J	81.1 ft-lb	Multiaxial Impact; ISO 6603
Taber Abrasion, mg/1000 Cycles	30	30	CS-17, 1 kg; SABIC Method

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 Âµm/m-Â°C	33.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	72.0 Âµm/m-Â°C	40.0 Âµin/in-Â°F	ISO 11359-2
	@Temperature -30.0 - 80.0 Â°C	@Temperature -22.0 - 176 Â°F	
CTE, linear, Transverse to Flow	82.0 Âµm/m-Â°C	45.6 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	90.0 Âµm/m-Â°C	50.0 Âµin/in-Â°F	ISO 11359-2
	@Temperature -30.0 - 80.0 Â°C	@Temperature -22.0 - 176 Â°F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	119 Â°C	246 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf

Thermal Properties	Metric °C	English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	97.0 °C	207 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	106 °C	223 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	133 °C	271 °F	Rate B/50; ASTM D1525
	133 °C	271 °F	Rate B/50; ISO 306
	135 °C	275 °F	Rate B/120; ISO 306

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