

SABIC Innovative Plastics Xenoy® X4850 PBT+PC (Asia Pacific)

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

Material Notes:

Xenoy X4850 is a hydrostable, high modulus, high ductile PC/PBT blend. Furthermore, this resin provides high chemical resistance, very low creep, low CTE, excellent fatigue and high heat dimensional stability. The X4850 could be positioned for body panels, safety equipment, housings, door handles, 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-X4850-PBTPC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D792
Density	1.31 g/cc	0.0473 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	4.5 g/10 min @ Load 5.00 kg, Temperature 266 °C	4.5 g/10 min @ Load 11.0 lb, Temperature 511 °F	ASTM D1238
Melt Index of Compound	4.0 g/10 min @ Load 5.00 kg, Temperature 265 °C	4.0 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	45.0 MPa	6530 psi	50 mm/min; ISO 527
	50.0 MPa	7250 psi	5 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	58.0 MPa	8410 psi	Type I, 5 mm/min; ASTM D638
	58.0 MPa	8410 psi	5 mm/min; ISO 527
	63.0 MPa	9140 psi	50 mm/min; ISO 527

Mechanical Properties	65.0 MPa Metric	9430 psi English	Type I, 50 mm/min; ASTM D638 Comments
Elongation at Break	30 %	30 %	50 mm/min; ISO 527
	80 %	80 %	5 mm/min; ISO 527
	130 %	130 %	Type I, 50 mm/min; ASTM D638
	140 %	140 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	3.4 %	3.4 %	5 mm/min; ISO 527
	3.5 %	3.5 %	50 mm/min; ISO 527
	3.7 %	3.7 %	Type I, 50 mm/min; ASTM D638
	3.8 %	3.8 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	3.85 GPa	558 ksi	1 mm/min; ISO 527
	4.00 GPa	580 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	94.0 MPa	13600 psi	2 mm/min; ISO 178
	99.0 MPa	14400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.50 GPa	508 ksi	2 mm/min; ISO 178
	3.70 GPa	537 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.80 J/cm	3.37 ft-lb/in	ASTM D256
	1.00 J/cm	1.87 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	1.20 J/cm	2.25 ft-lb/in	ASTM D256
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°F	
Izod Impact, Notched (ISO)	20.0 kJ/mÂ²	9.52 ft-lb/inÂ²	80*10*4; ISO 180/1A
	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	11.0 kJ/mÂ²	5.23 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature 0.000 Â°C	@Temperature 32.0 Â°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	2.00 J/cmÂ²	9.52 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.10 J/cmÂ²	5.23 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	60.0 J	44.3 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	60.0 J	44.3 ft-lb	ASTM D3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
Impact Test	100 J	73.8 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	52.0 Âµm/m-Â°C	28.9 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	63.0 Âµm/m-Â°C	35.0 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	75.0 Âµm/m-Â°C	41.7 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	81.0 Âµm/m-Â°C	45.0 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)	121 Â°C	250 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)	99.0 °C	210 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	101 °C	214 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	133 °C	271 °F	Rate B/50; ISO 306
	134 °C	273 °F	Rate B/50; ASTM D1525
	135 °C	275 °F	Rate B/120; ISO 306

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