

## SABIC Innovative Plastics Xenoy<sup>®</sup> X4810 PBT+PC (Asia Pacific)

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

### Material Notes:

Xenoy X4810 is a hydrostable, High Modulus Ductile PC/PBT blend. This resin provides low temperature (below 0C) ductile impact behaviour, high chemical resistance, very low creep, low CTE, excellent fatigue and high heat dimensional stability. Xenoy X4810 resin can be considered 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-X4810-PBTPC-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-X4810-PBTPC-Asia-Pacific.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.140 %	0.140 %	23 <sup>°</sup> 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	12 g/10 min @Load 5.00 kg, Temperature 266 <sup>°</sup> C	12 g/10 min @Load 11.0 lb, Temperature 511 <sup>°</sup> F	ASTM D1238
Melt Index of Compound	10 g/10 min @Load 5.00 kg, Temperature 265 <sup>°</sup> C	10 g/10 min @Load 11.0 lb, Temperature 509 <sup>°</sup> F	MVR [cm <sup>3</sup> /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	5 mm/min; ISO 527
	55.0 MPa	7980 psi	50 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 50 mm/min; ASTM D638
	65.0 MPa	9430 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 5 mm/min; ASTM D638
	55.0 MPa	7980 psi	5 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric 60.0 MPa	English 8700 psi	Comments 50 mm/min; ISO 527
Elongation at Break	100 %	100 %	5 mm/min; ISO 527
	100 %	100 %	50 mm/min; ISO 527
	150 %	150 %	Type I, 50 mm/min; ASTM D638
	150 %	150 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	4.1 %	4.1 %	5 mm/min; ISO 527
	4.1 %	4.1 %	50 mm/min; ISO 527
	4.5 %	4.5 %	Type I, 50 mm/min; ASTM D638
	4.7 %	4.7 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.75 GPa	399 ksi	1 mm/min; ISO 527
	2.90 GPa	421 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	87.0 MPa	12600 psi	2 mm/min; ISO 178
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.70 GPa	392 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	7.50 J/cm	14.1 ft-lb/in	ASTM D256
	1.50 J/cm	2.81 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 J/cm	9.37 ft-lb/in	ASTM D256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
Izod Impact, Notched (ISO)	50.0 kJ/m <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	20.0 kJ/m <sup>2</sup>	9.52 ft-lb/in <sup>2</sup>	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	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	80*10*4; ISO 180/1U
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 °C	@Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	5.00 J/cm <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	70.0 J	51.6 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	ASTM D3763
	70.0 J	51.6 ft-lb	ASTM D3763
	@Temperature -20.0 °C	@Temperature -4.00 °F	ASTM D3763
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	69.0 µm/m-°C	38.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	83.0 µm/m-°C	46.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-2
	@Temperature -30.0 - 80.0 °C	@Temperature -22.0 - 176 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft <sup>2</sup> - °F	ISO 8302
Deflection Temperature at 0.46 MPa			

(56 psi) Thermal Properties	115 Â°C Metric	239 Â°F English	Flatw 80*10*4 sp=64mm; ISO 75/Bf Comments
	120 Â°C @Thickness 3.20 mm	248 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	91.0 Â°C	196 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	98.0 Â°C @Thickness 3.20 mm	208 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	131 Â°C	268 Â°F	Rate B/50; ASTM D1525
	131 Â°C	268 Â°F	Rate B/50; ISO 306
	133 Â°C	271 Â°F	Rate B/120; ISO 306

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