

SABIC Innovative Plastics Xenoy® X4810 PBT+PC

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. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-X4810-PBTPC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.25 g/cc	1.25 g/cc	ASTM D 792
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.14 %	0.14 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.42 % @Temperature 23.0 Â°C	0.42 % @Temperature 73.4 Â°F	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	10 g/10 min @Load 5.00 kg, Temperature 265 Â°C	10 g/10 min @Load 11.0 lb, Temperature 509 Â°F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	12 g/10 min @Load 5.00 kg, Temperature 266 Â°C	12 g/10 min @Load 11.0 lb, Temperature 511 Â°F	ASTM D 1238

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 D 638
	65.0 MPa	9430 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	55.0 MPa	7980 psi	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	55.0 MPa Metric	7980 psi English	5 mm/min; ISO 527 Comments
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D 638
	60.0 MPa	8700 psi	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 D 638
	150 %	150 %	Type I, 5 mm/min; ASTM D 638
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 D 638
	4.7 %	4.7 %	Type I, 5 mm/min; ASTM D 638
Tensile Modulus	2.75 GPa	399 ksi	1 mm/min; ISO 527
	2.90 GPa	421 ksi	5 mm/min; ASTM D 638
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 D 790
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 D 790
Izod Impact, Notched	1.50 J/cm	2.81 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 J/cm	9.37 ft-lb/in	ASTM D 256
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	7.50 J/cm	14.1 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	12.0 kJ/m ²	5.71 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 0.000		

Mechanical Properties	Metric	English	Comments
	50.0 kJ/mÂ²	23.8 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	NB	NB	80*10*4; ISO 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
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	NB	NB	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Charpy Impact, Notched	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	5.00 J/cmÂ²	23.8 ft-lb/inÂ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Impact Test	110 J	81.1 ft-lb	Multiaxial Impact; ISO 6603
	70.0 J	51.6 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	70.0 J	51.6 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
Taber Abrasion, mg/1000 Cycles	30	30	CS-17; SABIC Method
	@Load 1.00 kg	@Load 2.20 lb	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	69.0 Âµm/m-Â°C	38.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 40.0 Â°C	@Temperature -40.0 - 104 Â°F	
	80.0 Âµm/m-Â°C	44.4 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@ Temperature -30.0 - 80.0 Â°C	@ Temperature -22.0 - 176 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	83.0 Âµm/m-Â°C	46.1 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)	115 Â°C	239 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	120 Â°C	248 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
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	208 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	131 Â°C	268 Â°F	Rate B/50; ASTM D 1525
	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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