SABIC Innovative Plastics XenoyÂ® X5410 PC+PET

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polyester, TP , Polyethylene Terephthalate (PET)

Material Notes:

Mineral filled PC+PET resin with high heat dimensional stability for paint systems. It has very low CTE and excellent flow - impact balance for automotive exterior applications, like body panels, tailgates, spoilers, rockerpanels or tankflapsThis 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-X5410-PCPET.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D 792
Density	1.26 g/cc	0.0455 lb/inÂ³	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	0.0065 - 0.0075 cm/cm @Thickness 3.20 mm	0.0065 - 0.0075 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	0.20 g/10 min @Load 2.16 kg, Temperature 250 Â°C	0.20 g/10 min @Load 4.76 lb, Temperature 482 Â°F	ASTM D 1238
	17 g/10 min @Load 2.16 kg, Temperature 265 Â°C	17 g/10 min @Load 4.76 lb, Temperature 509 Â°F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	19 g/10 min @Load 2.16 kg, Temperature 265 Â°C	19 g/10 min @Load 4.76 lb, Temperature 509 Â°F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	26.0 MPa	3770 psi	5 mm/min; ISO 527
	45.0 MPa	6530 psi	Type I, 5 mm/min; ASTM D 638
	45.0 MPa	6530 psi	Type I, 10 mm/min; SABIC - Japan Method
Tensile Strength, Yield	55.0 MPa	7980 psi	5 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Elongation at Break	12.1 %	12.1 %	5 mm/min; ISO 527
	38.7 %	38.7 %	Type I, 5 mm/min; ASTM D 638
	100 %	100 %	Type I, 10 mm/min; SABIC - Japan Method
Elongation at Yield	4.1 %	4.1 %	5 mm/min; ISO 527
	4.2 %	4.2 %	Type I, 5 mm/min; ASTM D 638
	67 %	67 %	Type I, 10 mm/min; SABIC - Japan Method
Tensile Modulus	3.19 GPa	463 ksi	1 mm/min; ISO 527
	3.23 GPa	468 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	92.0 MPa	13300 psi	1.3 mm/min, 50 mm span; ASTM D 790
	93.0 MPa	13500 psi	2 mm/min; ISO 178
Flexural Modulus	2.70 GPa	392 ksi	2 mm/min; ISO 178
	2.99 GPa	434 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.820 J/cm @Temperature -30.0 Â°C	1.54 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	0.870 J/cm @Temperature 23.0 Â°C	1.63 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Notched (ISO)	7.00 kJ/mÂ² @Temperature 23.0 Â°C	3.33 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
	7.00 kJ/mÂ² @Temperature -30.0 Â°C	3.33 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.900 J/cmÂ² @Temperature 23.0 Â°C	4.28 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	54.0 J @Temperature 23.0 Â°C	39.8 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	58.1 Âµm/m-Â°C @Temperature -30.0 - 80.0 Â°C	32.3 Âµin/in-Â°F @Temperature -22.0 - 176 Â°F	ISO 11359-2
	58.6 Âµm/m-Â°C @Temperature -40.0 - 60.0 Â°C	32.6 Âµin/in-Â°F @Temperature -40.0 - 140 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	70.1 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	38.9 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	70.5 Âµm/m-Â°C @Temperature -40.0 - 60.0 Â°C	39.2 Âµin/in-Â°F @Temperature -40.0 - 140 Â°F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	128 Â°C	262 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	129 Â°C @Thickness 3.20 mm	264 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
	134 Â°C @Thickness 6.40 mm	273 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	105 Â°C	221 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	109 Â°C @Thickness 3.20 mm	228 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
	121 Â°C @Thickness 6.40 mm	250 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Vicat Softening Point	137 Â°C	279 Â°F	Rate B/50; ASTM D 1525
	137 Â°C	279 Â°F	Rate B/50; ISO 306
	140 Â°C	284 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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