

SABIC Innovative Plastics Xenoy® 364 PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

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-364-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.31 g/cc	1.31 g/cc	ASTM D 792
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.030 %	0.030 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.090 % @Temperature 23.0 ^o C	0.090 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.011 cm/cm @Thickness 3.20 mm	0.011 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.010 cm/cm @Thickness 3.20 mm	0.010 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	17 g/10 min @Load 5.00 kg, Temperature 265 ^o C	17 g/10 min @Load 11.0 lb, Temperature 509 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	19 g/10 min @Load 5.00 kg, Temperature 266 ^o C	19 g/10 min @Load 11.0 lb, Temperature 511 ^o F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	36.0 MPa	5220 psi	Type I, 50 mm/min; ASTM D 638
	36.0 MPa	5220 psi	50 mm/min; ISO 527
Tensile Strength, Yield	45.0 MPa	6530 psi	Type I, 50 mm/min; ASTM D 638
	46.0 MPa	6670 psi	50 mm/min; ISO 527
Elongation at Break	36 %	36 %	50 mm/min; ISO 527
	39 %	39 %	Type I, 50 mm/min; ASTM D 638
Elongation at Yield	4.0 %	4.0 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	4.0% Metric	4.0% English	5.0 mm/min; ISO 527 Comments
Tensile Modulus	1.95 GPa	283 ksi	1 mm/min; ISO 527
	1.96 GPa	284 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	67.0 MPa	9720 psi	1.3 mm/min, 50 mm span; ASTM D 790
	69.0 MPa	10000 psi	2 mm/min; ISO 178
Flexural Modulus	1.77 GPa	257 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	1.83 GPa	265 ksi	2 mm/min; ISO 178
Izod Impact, Notched	4.27 J/cm	8.00 ft-lb/in	ASTM D 256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	6.94 J/cm	13.0 ft-lb/in	ASTM D 256
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	7.17 J/cm	13.4 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	17.0 kJ/m ²	8.09 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	51.0 kJ/m ²	24.3 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	5.10 J/cm ²	24.3 ft-lb/in ²	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	45.0 J	33.2 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	47.0 J	34.7 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	47.0 J	34.7 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	98.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	54.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	100 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	103 $\text{Å}^\circ\text{C}$	217 $\text{Å}^\circ\text{F}$	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	74.0 $\text{Å}^\circ\text{C}$	165 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	65.0 $\text{Å}^\circ\text{C}$	149 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	115 $\text{Å}^\circ\text{C}$	239 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D 1525
	119 $\text{Å}^\circ\text{C}$	246 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	122 $\text{Å}^\circ\text{C}$	252 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306

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