

SABIC Innovative Plastics Xenoy® 6380U PBT+PET (Asia Pacific)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , PBT + PET Blend, Glass Filled , Polyethylene Terephthalate (PET)

Material Notes:

XENOY 6380U is a 30% glass reinforced, UV stabilized grade, that combines high stiffness with improved ductility. The combination of mechanical properties at high and low temperatures and chemical resistance makes XENOY 6380U a suitable material for a wide range of demanding applications where safety is a primary consideration. The material's gloss characteristics are an added advantage for appearance parts in the appliance industry. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Xenoy-6380U-PBTPET-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D 792
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.50 % @Temperature 23.0 ^o C	0.50 % @Temperature 73.4 ^o F	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0070 cm/cm	0.0030 - 0.0070 in/in	on tensile bar; SABIC Method
	0.0030 - 0.0070 cm/cm @Thickness 3.20 mm	0.0030 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	9.0 g/10 min @Load 1.20 kg, Temperature 265 ^o C	9.0 g/10 min @Load 2.65 lb, Temperature 509 ^o F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	13 g/10 min @Load 1.20 kg, Temperature 266 ^o C	13 g/10 min @Load 2.65 lb, Temperature 511 ^o F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	110	110	ISO 2039-2
Hardness, H358/30	115 MPa	16700 psi	ISO 2039-1
Tensile Strength at Break	100 MPa	14500 psi	Type I, 5 mm/min; ASTM D 638
	105 MPa	15200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	100 MPa	14500 psi	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	105 MPa Metric	15200 psi English	5 mm/min; ISO 527 Comments
Elongation at Break	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D 638
	2.0 %	2.0 %	5 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D 638
	2.0 %	2.0 %	5 mm/min; ISO 527
Tensile Modulus	8.20 GPa	1190 ksi	5 mm/min; ASTM D 638
	8.40 GPa	1220 ksi	1 mm/min; ISO 527
Flexural Strength	145 MPa	21000 psi	2 mm/min; ISO 178
Flexural Yield Strength	140 MPa	20300 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	7.00 GPa	1020 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	7.20 GPa	1040 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.600 J/cm @Temperature -30.0 °C	1.12 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	0.800 J/cm @Temperature 23.0 °C	1.50 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	6.00 J/cm @Temperature -30.0 °C	11.2 ft-lb/in @Temperature -22.0 °F	ASTM D 4812
	6.50 J/cm @Temperature 23.0 °C	12.2 ft-lb/in @Temperature 73.4 °F	ASTM D 4812
Izod Impact, Notched (ISO)	6.00 kJ/m ² @Temperature -30.0 °C	2.86 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
	10.0 kJ/m ² @Temperature 23.0 °C	4.76 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	40.0 kJ/m ² @Temperature -30.0 °C	19.0 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1U
	40.0 kJ/m ²	19.0 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 23.0 Â°C	English @ Temperature 73.4 Â°F	80*10*4-ISO 180/1U Comments
Charpy Impact Unnotched	3.50 J/cmÂ² @Temperature -30.0 Â°C	16.7 ft-lb/inÂ² @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	4.00 J/cmÂ² @Temperature 23.0 Â°C	19.0 ft-lb/inÂ² @Temperature 73.4 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.700 J/cmÂ² @Temperature -30.0 Â°C	3.33 ft-lb/inÂ² @Temperature -22.0 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cmÂ² @Temperature 23.0 Â°C	4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	7.00 J @Temperature 23.0 Â°C	5.16 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	23.0 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	12.8 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
	25.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	13.9 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	100 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	55.6 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	130 Âµm/m-Â°C @Temperature 23.0 - 80.0 Â°C	72.2 Âµin/in-Â°F @Temperature 73.4 - 176 Â°F	ISO 11359-2
Thermal Conductivity	0.190 W/m-K	1.32 BTU-in/hr-ftÂ²- Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	215 Â°C	419 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
Deflection Temperature at 1.8 MPa (264 psi)	180 Â°C	356 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	165 Â°C	329 Â°F	unannealed; ASTM D 648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Vicat Softening Point	180 Å°C	356 Å°F	Rate B/120; ISO 306
	180 Å°C	356 Å°F	Rate B/50; ISO 306
	180 Å°C	356 Å°F	Rate B/50; ASTM D 1525
	215 Å°C	419 Å°F	Rate A/50; ISO 306
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	2nd value; UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	750 Å°C	1380 Å°F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+14 ohm-cm	>= 1.00e+14 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ROA; IEC 60093
Dielectric Constant	4.0	4.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.2	4.2	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	17.0 kV/mm	432 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	20.0 kV/mm	508 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	300 V	300 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125Â°C +/- 2Â°C	PASSES	IEC 60695-10-2

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