

SABIC Innovative Plastics XYLEX X8300 PC+POLYESTER (Asia Pacific)

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

Material Notes:

PC+Polyester, UV Stabilized, Transparent

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-XYLEX-X8300-PCPOLYESTER-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.050 %	0.050 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0080 cm/cm @Thickness 3.20 mm	0.0050 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	15 g/10 min @Load 2.16 kg, Temperature 265 ^o C	15 g/10 min @Load 4.76 lb, Temperature 509 ^o F	ASTM D1238
Melt Index of Compound	15 g/10 min @Load 2.16 kg, Temperature 265 ^o C	15 g/10 min @Load 4.76 lb, Temperature 509 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73	73	10S reading; ASTM D2240
Tensile Strength at Break	46.0 MPa	6670 psi	Type I, 50 mm/min; ASTM D638
	54.0 MPa	7830 psi	50 mm/min; ISO 527
Tensile Strength, Yield	47.0 MPa	6820 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	150 %	150 %	Type I, 50 mm/min; ASTM D638
	>= 200 %	>= 200 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	$\geq 5.0\%$ Metric	$\geq 5.0\%$ English	50 mm/min; ISO 527 Comments
Tensile Modulus	1.52 GPa	220 ksi	50 mm/min; ASTM D638
	1.60 GPa	232 ksi	1 mm/min; ISO 527
Flexural Strength	78.0 MPa	11300 psi	2 mm/min; ISO 178
Flexural Yield Strength	71.0 MPa	10300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	1.68 GPa	244 ksi	1.3 mm/min, 50 mm span; ASTM D790
	1.70 GPa	247 ksi	2 mm/min; ISO 178
Izod Impact, Notched	11.2 J/cm	21.0 ft-lb/in	ASTM D256
	0.730 J/cm	1.37 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -10.0 °C	@Temperature 14.0 °F	
	7.00 kJ/m ²	3.33 ft-lb/in ²	80*10*4; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	95.0 J	70.1 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature 23.0 - 60.0 °C	@Temperature 73.4 - 140 °F	
	105 $\mu\text{m}/\text{m}\cdot\text{°C}$	58.3 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	105 $\mu\text{m}/\text{m}\cdot\text{°C}$	58.3 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Properties CTE, linear, Transverse to Flow	90.0 $\hat{\mu}\text{m}/\text{m}\cdot\hat{\text{A}}^\circ\text{C}$ Metric	50.0 $\hat{\mu}\text{in}/\text{in}\cdot\hat{\text{A}}^\circ\text{F}$ English	Comments ISO 11359-2
	@Temperature 23.0 - 60.0 $\hat{\text{A}}^\circ\text{C}$	@Temperature 73.4 - 140 $\hat{\text{A}}^\circ\text{F}$	
	105 $\hat{\mu}\text{m}/\text{m}\cdot\hat{\text{A}}^\circ\text{C}$	58.3 $\hat{\mu}\text{in}/\text{in}\cdot\hat{\text{A}}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\hat{\text{A}}^\circ\text{C}$	@Temperature -40.0 - 104 $\hat{\text{A}}^\circ\text{F}$	
	105 $\hat{\mu}\text{m}/\text{m}\cdot\hat{\text{A}}^\circ\text{C}$	58.3 $\hat{\mu}\text{in}/\text{in}\cdot\hat{\text{A}}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\hat{\text{A}}^\circ\text{C}$	@Temperature -40.0 - 104 $\hat{\text{A}}^\circ\text{F}$	
Thermal Conductivity	0.230 W/m-K	1.60 BTU-in/hr-ft $\hat{\text{A}}^2\cdot\hat{\text{A}}^\circ\text{F}$	ISO 8302
Hot Ball Pressure Test	<= 85.0 $\hat{\text{A}}^\circ\text{C}$	<= 185 $\hat{\text{A}}^\circ\text{F}$	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	79.0 $\hat{\text{A}}^\circ\text{C}$	174 $\hat{\text{A}}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	78.0 $\hat{\text{A}}^\circ\text{C}$	172 $\hat{\text{A}}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	80.0 $\hat{\text{A}}^\circ\text{C}$	176 $\hat{\text{A}}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	75.0 $\hat{\text{A}}^\circ\text{C}$	167 $\hat{\text{A}}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	91.0 $\hat{\text{A}}^\circ\text{C}$	196 $\hat{\text{A}}^\circ\text{F}$	Rate B/50; ASTM D1525
	96.0 $\hat{\text{A}}^\circ\text{C}$	205 $\hat{\text{A}}^\circ\text{F}$	Rate B/120; ISO 306
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	750 $\hat{\text{A}}^\circ\text{C}$	1380 $\hat{\text{A}}^\circ\text{F}$	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.539	1.539	ISO 489
Haze	1.0 %	1.0 %	ASTM D1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	88 %	88 %	2.54 mm; ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	ASTM D257

Electrical Properties	Metric	English	Comments
Surface Resistance	$\geq 1.00 \times 10^{15} \text{ ohm}$	$\geq 1.00 \times 10^{15} \text{ ohm}$	ASTM D257
Comparative Tracking Index	$\geq 600 \text{ V}$	$\geq 600 \text{ V}$	UL 746A

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