

SABIC Innovative Plastics Lexan® XHT3143 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

XHT3143 is a high flow, UV stabilized, high heat polycarbonate copolymer. It is available in a range of opaque and limited transparent colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-XHT3143-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption	0.300 %	0.300 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0090 cm/cm @Thickness 3.20 mm	0.0060 - 0.0090 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	33 g/10 min @Load 2.16 kg, Temperature 330 °C	33 g/10 min @Load 4.76 lb, Temperature 626 °F	ASTM D1238
Melt Index of Compound	30 g/10 min @Load 2.16 kg, Temperature 330 °C	30 g/10 min @Load 4.76 lb, Temperature 626 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	60.0 MPa	8700 psi	50 mm/min; ISO 527
Tensile Strength, Yield	70.0 MPa	10200 psi	Type I, 50 mm/min; ASTM D638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Elongation at Break	70 %	70 %	Type I, 50 mm/min; ASTM D638
	70 %	70 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D638
	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527

Mechanical Properties	2.70 GPa Metric	392 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	80.0 MPa	11600 psi	2 mm/min; ISO 178
	120 MPa	17400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.60 GPa	377 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.970 J/cm	1.82 ft-lb/in	ASTM D256
	0.550 J/cm @Temperature -30.0 °C	1.03 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	80*10*3; ISO 180/1A
	9.00 kJ/m ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm ²	5.23 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	68.0 J	50.2 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C	33.3 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Properties <i>CTE, linear, transverse to Flow</i>	60.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ Metric	33.3 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ English	Comments ASTM E 831
	@Temperature -40.0 - 40.0 $^\circ\text{C}$	@Temperature -40.0 - 104 $^\circ\text{F}$	
	60.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $^\circ\text{C}$	@Temperature -40.0 - 104 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	166 $^\circ\text{C}$	331 $^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	152 $^\circ\text{C}$	306 $^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	156 $^\circ\text{C}$	313 $^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	168 $^\circ\text{C}$	334 $^\circ\text{F}$	Rate B/50; ISO 306
	170 $^\circ\text{C}$	338 $^\circ\text{F}$	Rate B/120; ISO 306
	170 $^\circ\text{C}$	338 $^\circ\text{F}$	Rate B/50; ASTM D1525

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