SABIC Innovative Plastics Lexan® XHT2141 PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

XHT2141 is a high flow, 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-XHT2141-PC-Copolymer-Asia-Pacific.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/in³	ISO 1183
Moisture Absorption	0.230 %	0.230 %	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	46 g/10 min @Load 2.16 kg, Temperature 330 °C	46 g/10 min @Load 4.76 lb, Temperature 626 °F	ASTM D1238
Melt Index of Compound	43 g/10 min @Load 2.16 kg, Temperature 330 °C	43 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	60.0 MPa	8700 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	90 %	90 %	Type I, 50 mm/min; ASTM D638
	90 %	90 %	50 mm/min; ISO 527
Elongation at Yield	6.5 %	6.5 %	Type I, 50 mm/min; ASTM D638
	6.5 %	6.5 %	50 mm/min; ISO 527
Tensile Modulus	2.60 GPa	377 ksi	5 mm/min; ASTM D638
	2.60 GPa	377 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
	110 MPa	16000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.45 GPa	355 ksi	2 mm/min; ISO 178
	2.55 GPa	370 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.15 J/cm	2.15 ft-lb/in	ASTM D256
	0.750 J/cm @Temperature -30.0 °C	1.41 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	10.0 kJ/m²	4.76 ft-lb/in²	80*10*3; ISO 180/1A
	11.0 kJ/m²	5.23 ft-lb/in²	80*10*4; ISO 180/1A
	9.00 kJ/m² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*4; 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	1.20 J/cm²	5.71 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm² @Temperature -30.0 °C	4.28 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	68.0 J @Temperature 23.0 °C	50.2 ft-lb @Temperature 73.4 °F	ASTM D3763

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

Thermal Properties	Metric	English	Comments
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft²-°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	155 °C	311 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	155 °C @Thickness 3.20 mm	311 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	142 °C	288 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	145 °C @Thickness 3.20 mm	293 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	160 °C	320 °F	Rate B/50; ISO 306
	161 °C	322 °F	Rate B/50; ASTM D1525
	162 °C	324 °F	Rate B/120; ISO 306
UL RTI, Electrical	150 °C	302 °F	UL 746B
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746B
UL RTI, Mechanical without Impact	150 °C	302 °F	UL 746B

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+17 ohm	>= 1.00e+17 ohm	ASTM D257
Dielectric Strength	22.6 kV/mm @Thickness 3.20 mm	574 kV/in @Thickness 0.126 in	in oil; ASTM D149
Comparative Tracking Index	175 - 250 V	175 - 250 V	UL 746A
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	Passes	IEC 60695-10-2
Metallized Haze Onset	155°C	SABIC Method

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