

SABIC Innovative Plastics Lexan® LUX9130T PC COPOLYMER (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LUX9130T Polycarbonate (PC) resin is a non-filled, injection moldable grade. This non-chlorinated, non-brominated flame retardant PC has an UL-94 V0 rating at 1.5 mm / 5VA rating at 6.0mm and is UV stabilized providing additional weathering capability. LUX9130T is high transparency, extremely low haze and bubble free for thick part molding. LUX9130T is available in clear transparent and tinted color options that is an excellent candidate for a wide variety of applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-LUX9130T-PC-COPOLYMER-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption	0.0100 %	0.0100 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.10 %	0.10 %	ISO 62
Linear Mold Shrinkage, Flow	0.0045 - 0.0065 cm/cm @Thickness 3.20 mm	0.0045 - 0.0065 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	18 g/10 min @Load 1.20 kg, Temperature 300 °C	18 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	17 g/10 min @Load 1.20 kg, Temperature 300 °C	17 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D638
	64.0 MPa	9280 psi	50 mm/min; ISO 527
Elongation at Break	52 %	52 %	50 mm/min; ISO 527
	72 %	72 %	Type I, 50 mm/min; ASTM D638

Elongation at Yield Mechanical Properties	6.0 % Metric	6.0 % English	Type I, 50 mm/min; ASTM D638 Comments
	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.37 GPa	344 ksi	50 mm/min; ASTM D638
	2.40 GPa	348 ksi	1 mm/min; ISO 527
Flexural Yield Strength	98.0 MPa	14200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.30 GPa	334 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.41 GPa	350 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256
	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB	NB	ASTM D4812
	@Temperature -30.0 °C	@Temperature -22.0 °F	
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	4.28 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Izod Impact, Unnotched (ISO)	130 kJ/m ²	61.9 ft-lb/in ²	80*10*3; ISO 180/1U
	130 kJ/m ²	61.9 ft-lb/in ²	80*10*3; ISO 180/1U
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm ²	4.28 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Dart Drop, Total Energy	55.0 J	40.6 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	39.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^\circ\text{C}$	@Temperature -40.0 - 104 $^\circ\text{F}$	
	74.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	41.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $^\circ\text{C}$	@Temperature 73.4 - 176 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	71.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	39.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $^\circ\text{C}$	@Temperature -40.0 - 104 $^\circ\text{F}$	
	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 80.0 $^\circ\text{C}$	@Temperature 73.4 - 176 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	131 $^\circ\text{C}$	268 $^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
	131 $^\circ\text{C}$	268 $^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	120 $^\circ\text{C}$	248 $^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	120 $^\circ\text{C}$	248 $^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	137 $^\circ\text{C}$	279 $^\circ\text{F}$	Rate B/50; ASTM D1525
	137 $^\circ\text{C}$	279 $^\circ\text{F}$	Rate B/50; ISO 306
	139 $^\circ\text{C}$	282 $^\circ\text{F}$	Rate B/120; ISO 306
UL RTI, Electrical	115 $^\circ\text{C}$	239 $^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	115 $^\circ\text{C}$	239 $^\circ\text{F}$	UL 746B
Flammability, UL94	V-2	V-2	UL 94
	@Thickness 0.400 mm	@Thickness 0.0157 in	
	V-0	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	UL 94
	@Thickness 6.00 mm	@Thickness 0.236 in	
Glow Wire Test	850 $^\circ\text{C}$	1560 $^\circ\text{F}$	IEC 60695-2-13

Thermal Properties	960 °C Metric	1760 °F English	Comments 2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	>= 88 %	>= 88 %	6.0 mm; ASTM D1003
	>= 89.5 %	>= 89.5 %	3.0 mm; SABIC Method
	>= 90 %	>= 90 %	2.0 mm; SABIC Method
	>= 90.5 %	>= 90.5 %	1.0 mm; SABIC Method

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.81	2.81	ASTM ES 7-83
	@Frequency 1.00e+9 Hz	@Frequency 1.00e+9 Hz	
Dissipation Factor	0.0058	0.0058	ASTM ES 7-83
	@Frequency 1.10e+9 Hz	@Frequency 1.10e+9 Hz	
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A

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

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