SABIC Innovative Plastics Lexan® LUX2114G PC (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan LUX2114G (EXRL0943) is a diffusive, mid viscosity, uv stabilized, flame retardant polycarbonate with improved light transmission and providing good colorstability under heat exposure. Developed for injection molding LED applications

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-LUX2114G-PC-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in³	ASTM D792
Water Absorption	0.15 % @Time 86400 sec	0.15 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	0.35 %	0.35 %	ASTM D570
	0.58 % @Temperature 100 °C	0.58 % @Temperature 212 °F	ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	17.5 g/10 min @Load 1.20 kg, Temperature 300 °C	17.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	18 g/10 min @Load 1.20 kg, Temperature 300 °C	18 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	63.0 MPa	9140 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	Type I, 50 mm/min; ASTM D638
	63.0 MPa	9140 psi	50 mm/min; ISO 527
Elongation at Break	110 %	110 %	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Elongation at Yield	2.5 %	2.5 %	50 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM D790
	94.0 MPa	13600 psi	2 mm/min; ISO 178
Flexural Modulus	2.30 GPa	334 ksi	2 mm/min; ISO 178
	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	6.00 J/cm	11.2 ft-lb/in	ASTM D256
Izod Impact, Unnotched	32.0 J/cm	59.9 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	65.0 kJ/m²	30.9 ft-lb/in²	80*10*3; ISO 180/1A
	11.0 kJ/m² @Temperature -30.0 °C	5.23 ft-lb/in² @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	6.50 J/cm²	30.9 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.20 J/cm² @Temperature -30.0 °C	5.71 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Tensile Impact Strength	546 kJ/m²	260 ft-lb/in²	Type S; ASTM D1822
Dart Drop, Total Energy	169 J	125 ft-lb	ASTM D3029
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.4 µm/m-°C @Temperature -40.0 - 95.0 °C	38.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.26 J/g-°C	0.301 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft²-°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @Thickness 6.40 mm	279 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C @Thickness 6.40 mm	270 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	145 °C	293 °F	Rate B/120; ISO 306
	154 °C	309 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical with Impact	125 °C	257 °F	UL 746B
UL RTI, Mechanical without Impact	125 °C	257 °F	UL 746B
Flammability, UL94	V-2 @Thickness 0.750 - 3.00 mm	V-2 @Thickness 0.0295 - 0.118 in	UL 94
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-13
	875 °C	1610 °F	IEC 60695-2-13
	750 °C @Thickness 0.750 mm	1380 °F @Thickness 0.0295 in	IEC 60695-2-12
	850 °C @Thickness 1.50 mm	1560 °F @Thickness 0.0591 in	IEC 60695-2-12

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	2.96 @Frequency 1.00e+6 Hz	2.96 @Frequency 1.00e+6 Hz	ASTM D150
	3.17 @Frequency 50.0 - 60.0 Hz	3.17 @Frequency 50.0 - 60.0 Hz	ASTM D150

Electrical Properties	Metric V/mm	English V/in	Comments
Dielectric Strength	@Thickness 3.20 mm	@Thickness 0.126 in	in air; ASTM D149
Dissipation Factor	0.00090 @Frequency 50.0 - 60.0 Hz	0.00090 @Frequency 50.0 - 60.0 Hz	ASTM D150
	0.010 @Frequency 1.00e+6 Hz	0.010 @Frequency 1.00e+6 Hz	ASTM D150
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	60 - 120 arcs	60 - 120 arcs	UL 746A

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2
Specific Volume	0.83cm^3/g	ASTM D792
UV-light, water exposure/immersion	F2	UL 746C

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