SABIC Innovative Plastics Lexan® EXL1434T PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan* EXL1434T polycarbonate (PC) siloxane copolymer resin is a UV stabilized transparent injection molding grade. This resin offers extreme low temperature (-40 C) ductility in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1434T resin is a UV stabilized general purpose product available in transparent and opaque colors and is an excellent candidate for a broad range of applications.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL1434T-PC-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183
Moisture Absorption	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 %	0.12 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	87	87	ISO 2039-2
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527
	59.0 MPa	8560 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	56.0 MPa	8120 psi	50 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Elongation at Break	108.5 %	108.5 %	50 mm/min; ISO 527
	123.9 %	123.9 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.4 %	5.4 %	50 mm/min; ISO 527
	5.6 %	5.6 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.18 GPa	316 ksi	50 mm/min; ASTM D638
	2.30 GPa	334 ksi	1 mm/min; ISO 527
Flexural Yield Strength	88.0 MPa	12800 psi	2 mm/min; ISO 178
	92.0 MPa	13300 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.12 GPa	307 ksi	2 mm/min; ISO 178
	2.18 GPa	316 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	8.24 J/cm	15.4 ft-lb/in	ASTM D256
	7.12 J/cm @Temperature -30.0 °C	13.3 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	65.0 kJ/m²	30.9 ft-lb/in²	80*10*3; ISO 180/1A
	55.0 kJ/m² @Temperature -30.0 °C	26.2 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	7.00 J/cm²	33.3 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	6.00 J/cm² @Temperature -30.0 °C	28.6 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	75.0 J @Temperature 23.0 °C	55.3 ft-lb @Temperature 73.4 °F	ASTM D3763
	77.0 J	56.8 ft-lb	

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	67.0 µm/m-°C @Temperature -40.0 - 95.0 °C	37.2 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	67.0 µm/m-°C @Temperature 23.0 - 80.0 °C	37.2 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature -40.0 - 95.0 °C	44.4 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E 831
	80.0 µm/m-°C @Temperature 23.0 - 80.0 °C	44.4 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	116 °C	241 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	120 °C @Thickness 3.20 mm	248 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	138 °C	280 °F	Rate A/50; ASTM D1525
	138 °C	280 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical without Impact	130 °C	266 °F	UL 746B
Flammability, UL94	V-2 @Thickness 3.00 mm	V-2 @Thickness 0.118 in	UL 94
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-13
	850 °C	1560 °F	IEC 60695-2-13
	960 °C @Thickness 3.00 mm	1760 °F @Thickness 0.118 in	IEC 60695-2-12

Optical Properties	Metric	English	Comments
Haze	3.0 % @Thickness 2.54 mm	3.0 % @Thickness 0.100 in	ASTM D1003

Optical Properties	Metric	English	Comments
Transmission, Visible	82 %	82 %	2.54 mm, ASTM D1003

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

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

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