

## SABIC Innovative Plastics Lexan® EXL1464T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Lexan® EXL1464T polycarbonate (PC) siloxane copolymer resin is a transparent injection molding grade. This resin offers extreme low temperature (-40 °C) ductility in combination with medium flow characteristics, improved release and excellent processability with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1464T resin is an improved release general purpose product available in transparent and opaque colors and is an excellent candidate for a broad range of applications. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Lexan-EXL1464T-PC-Copolymer.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-EXL1464T-PC-Copolymer.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 % @Temperature 23.0 °C	0.12 % @Temperature 73.4 °F	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	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133
	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

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 D 638
Tensile Strength, Yield	56.0 MPa	8120 psi	50 mm/min; ISO 527
	57.0 MPa	8270 psi	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Elongation at Break	123.9 %	123.9 %	50 mm/min; ISO 527
Elongation at Yield	5.4 %	5.4 %	Type I, 50 mm/min; ASTM D 638
	5.6 %	5.6 %	50 mm/min; ISO 527
			Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.18 GPa	316 ksi	50 mm/min; ASTM D 638
	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 D 790
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 D 790
Izod Impact, Notched	7.12 J/cm	13.3 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.24 J/cm	15.4 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	55.0 kJ/m <sup>2</sup>	26.2 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	65.0 kJ/m <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	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
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	6.00 J/cm <sup>2</sup>	28.6 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	V-notch Edgew 80*10*3 sp=62mm;

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
Impact Test	75.0 J	55.3 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	77.0 J	56.8 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	67.0 µm/m-°C	37.2 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	67.0 µm/m-°C	37.2 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 1.8 MPa (264 psi)	116 °C	241 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	120 °C	248 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	138 °C	280 °F	Rate A/50; ASTM D 1525
	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	V-2	UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	850 °C	1560 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 0.800 mm	@Thickness 0.0315 in	
	850 °C	1560 °F	Glow Wire Ignitability Temperature;

Thermal Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	IEC 60695-2-13 Comments
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

Optical Properties	Metric	English	Comments
Haze	3.0 %	3.0 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	82 %	82 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{15}$ ohm-cm	$\geq 1.00 \times 10^{15}$ ohm-cm	ASTM D 257
Surface Resistance	$\geq 1.00 \times 10^{15}$ ohm	$\geq 1.00 \times 10^{15}$ ohm	ASTM D 257

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

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