

SABIC Innovative Plastics Lexan® SLX2231T PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Low viscosity PC copolymer blend with enhanced UV stabilization and added release agent. V2 rated. Available in transparent and tinted colors. 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-SLX2231T-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 % @Temperature 23.0 °C	0.35 % @Temperature 73.4 °F	ISO 62
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	16 g/10 min @Load 1.20 kg, Temperature 300 °C	16 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	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 D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	67.0 MPa	9720 psi	Type I, 50 mm/min; ASTM D 638
	70.0 MPa	10200 psi	50 mm/min; ISO 527
Tensile Strength, Yield	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D 638
	67.0 MPa	9720 psi	50 mm/min; ISO 527
Elongation at Break	>= 100 %	>= 100 %	Type I, 50 mm/min; ASTM D 638
	>= 100 %	>= 100 %	50 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	Type I, 50 mm/min; ASTM D 638
	6.0 %	6.0 %	50 mm/min; ISO 527
Tensile Modulus	2.30 GPa	334 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.40 GPa	English 348 ksi	Comments 5 mm/min; ASTM D 638
Flexural Yield Strength	96.0 MPa	13900 psi	1.3 mm/min, 50 mm span; ASTM D 790
	96.0 MPa	13900 psi	2 mm/min; ISO 178
Flexural Modulus	2.45 GPa	355 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	2.45 GPa	355 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.30 J/cm @Temperature -30.0 °C	2.44 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	7.80 J/cm @Temperature 23.0 °C	14.6 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	25.0 kJ/m ² @Temperature 23.0 °C	11.9 ft-lb/in ² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.50 J/cm ² @Temperature -30.0 °C	7.14 ft-lb/in ² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	3.00 J/cm ² @Temperature 23.0 °C	14.3 ft-lb/in ² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	80.0 J @Temperature 23.0 °C	59.0 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2

Thermal Properties	Metric °m-°C	English °in-°F	Comments
CTE, linear, Transverse to Flow	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	118 °C	244 °F	unannealed; ASTM D 648
Vicat Softening Point	133 °C	271 °F	Rate B/50; ISO 306
	@Thickness 3.20 mm	@Thickness 0.126 in	Rate B/120; ISO 306
Flammability, UL94	137 °C	279 °F	Rate B/50; ASTM D 1525
	137 °C	279 °F	UL 94 by SABIC-IP
Glow Wire Test	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 1.00 mm	@Thickness 0.0394 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 2.00 mm	@Thickness 0.0787 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 2.50 mm	@Thickness 0.0984 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Optical Properties	Metric	English	Comments
Haze	0.60 %	0.60 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	
Transmission, Visible	89 %	89 %	ASTM D 1003
	@Thickness 2.54 mm	@Thickness 0.100 in	

Descriptive Properties	Value	Comments
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Ball Pressure Test: 125°C +/- 2°C Descriptive Properties	passes Value	IEC 60595-10-2 Comments
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China