

SABIC Innovative Plastics Lexan® SLX2431D PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Medium viscosity PC copolymer blend with enhanced UV stabilization and added release agent. V2 rated. Available in diffusion 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-SLX2431D-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	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 ³ /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
Tensile Strength at Break	70.0 MPa	10200 psi	50 mm/min; ISO 527
	73.0 MPa	10600 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	65.0 MPa	9430 psi	50 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 50 mm/min; ASTM D 638
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 %	50 mm/min; ISO 527
	6.4 %	6.4 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.30 GPa	334 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.33 GPa	English 338 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
	100 MPa	14500 psi	2 mm/min; ISO 178
Flexural Modulus	2.33 GPa	338 ksi	2 mm/min; ISO 178
	2.33 GPa	338 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.25 J/cm	7.96 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	65.0 kJ/m ²	30.9 ft-lb/in ²	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	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.50 J/cm ²	30.9 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	80.0 J	59.0 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	63.0 µm/m-°C	35.0 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	63.0 µm/m-°C	35.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	

Thermal Properties	Metric $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	English $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	Comments
CTE, linear, Transverse to Flow	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	ISO 11359-2
	63.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	35.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM E 831
Deflection Temperature at 1.8 MPa (264 psi)	131 °C	268 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	134 °C @Thickness 3.20 mm	273 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	137 °C	279 °F	Rate B/50; ASTM D 1525
	137 °C	279 °F	Rate B/50; ISO 306
	139 °C	282 °F	Rate B/120; ISO 306
Flammability, UL94	V-2	V-2	UL 94 by SABIC-IP
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Glow Wire Test	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	
	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 2.50 mm	@Thickness 0.0984 in	
	825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 2.00 mm	@Thickness 0.0787 in	
825 °C	1520 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13	
@Thickness 1.00 mm	@Thickness 0.0394 in		
	960 °C	1760 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	

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

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