

SABIC Innovative Plastics Lexan® SD1278 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® SD1278 polycarbonate (PC) siloxane copolymer resin is a transparent extrusion grade for food contact applications for sheet extrusion. This resin offers extreme low temperature (-40 °C) ductility. Lexan SD1278 resin is an FDA compliant product available in transparent colors and is an excellent candidate for extrusion/blow molding food contact applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-SD1278-PC-Copolymer.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/in ³	ISO 1183
Moisture Absorption	0.0900 %	0.0900 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.24 %	0.24 %	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
Melt Flow	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	6.0 g/10 min @Load 1.20 kg, Temperature 300 °C	6.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	61.0 MPa	8850 psi	50 mm/min; ISO 527
	64.0 MPa	9280 psi	Type I, 50 mm/min; ASTM D638
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527
	58.0 MPa	8410 psi	Type I, 50 mm/min; ASTM D638
Elongation at Break	124.9 %	124.9 %	50 mm/min; ISO 527
	131.4 %	131.4 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	5.5 %	5.5 %	50 mm/min; ISO 527
	5.8 %	5.8 %	Type I, 50 mm/min; ASTM D638
Tensile Modulus	2.21 GPa	321 ksi	50 mm/min; ASTM D638

Mechanical Properties	Metric 2-33 GPa	English 331 ksi	Comments 1 mm/min; ISO 527
Flexural Yield Strength	90.0 MPa	13100 psi	2 mm/min; ISO 178
	94.0 MPa	13600 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.15 GPa	312 ksi	2 mm/min; ISO 178
	2.21 GPa	321 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	8.90 J/cm	16.7 ft-lb/in	ASTM D256
	7.95 J/cm @Temperature -30.0 °C	14.9 ft-lb/in @Temperature -22.0 °F	ASTM D256
Izod Impact, Notched (ISO)	56.0 kJ/m ²	26.6 ft-lb/in ²	80*10*4; ISO 180/1A
	29.0 kJ/m ² @Temperature -30.0 °C	13.8 ft-lb/in ² @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	7.40 J/cm ²	35.2 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	2.40 J/cm ² @Temperature -30.0 °C	11.4 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	82.0 J	60.5 ft-lb	ASTM D3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	85.0 J	62.7 ft-lb	ASTM D3763
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	71.5 µm/m-°C	39.7 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	71.5 µm/m-°C	39.7 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
CTE, linear, Transverse to Flow	79.3 µm/m-°C	44.1 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	79.3 µm/m-°C	44.1 µin/in-°F	ISO 11359-2
	@Temperature 23.0 -	@Temperature 73.4 -	

Thermal Properties	80.0 °C Metric	176 °F English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	118 °C	244 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	124 °C @Thickness 3.20 mm	255 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	141 °C	286 °F	Rate A/50; ASTM D1525
	141 °C	286 °F	Rate B/50; ISO 306
	142 °C	288 °F	Rate B/120; ISO 306

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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