

## SABIC Innovative Plastics Lexan® 1173X PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

Lexan® 1173X polycarbonate (PC) resin is a high flow, UV stabilized injection molding grade. This resin offers good low temperature (-30 C) ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins. Lexan 1173X resin is a general purpose product available in a wide range of opaque colors and may be 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-1173X-PC-Copolymer-Europe-Africa-Middle-East.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-1173X-PC-Copolymer-Europe-Africa-Middle-East.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.150 %	0.150 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.35 %	0.35 %	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	17 g/10 min @Load 1.20 kg, Temperature 300 °C	17 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	16 g/10 min @Load 1.20 kg, Temperature 300 °C	16 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm <sup>3</sup> /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	57.0 MPa	8270 psi	50 mm/min; ISO 527
Elongation at Break	100 %	100 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	50 mm/min; ISO 527
Tensile Modulus	2.15 GPa	312 ksi	1 mm/min; ISO 527

Flexural Yield Strength Mechanical Properties	85.0 MPa Metric	12300 psi English	2 mm/min; ISO 178 Comments
Flexural Modulus	2.25 GPa	326 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	65.0 kJ/m <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	80*10*3; ISO 180/1A
	50.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	23.8 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*3; ISO 180/1A
	60.0 kJ/m <sup>2</sup> @Temperature 0.000 °C	28.6 ft-lb/in <sup>2</sup> @Temperature 32.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	NB @Temperature 0.000 °C	NB @Temperature 32.0 °F	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	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	5.00 J/cm <sup>2</sup> @Temperature -30.0 °C	23.8 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	75.0 µm/m-°C @Temperature 23.0 - 80.0 °C	41.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
CTE, linear, Transverse to Flow	75.0 µm/m-°C @Temperature 23.0 - 80.0 °C	41.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	136 °C	277 °F	edgew. Annealed 80°C, 4 hrs; ISO 75/Be
	137 °C @Thickness 3.20 mm	279 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	125 °C	257 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae

Thermal Properties	124 °C Metric	255 °F English	Comments ; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	144 °C	291 °F	Rate B/50; ASTM D1525
	144 °C	291 °F	Rate B/50; ISO 306
	145 °C	293 °F	Rate B/120; ISO 306
Oxygen Index	32 %	32 %	ISO 4589
Glow Wire Test	875 °C	1610 °F	IEC 60695-2-13
	875 °C	1610 °F	IEC 60695-2-13
	850 °C	1560 °F	IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	
	960 °C	1760 °F	IEC 60695-2-12
	@Thickness 3.00 mm	@Thickness 0.118 in	

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

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