

SABIC Innovative Plastics Lexan® DMX1132 PC Copolymer

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® DMX1132 is a high flow polycarbonate copolymer resin with improved ammonia resistance over regular polycarbonate resin.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-DMX1132-PC-Copolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D792
	1.19 g/cc	0.0430 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	38.5 g/10 min	38.5 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	
Melt Index of Compound	36 g/10 min	36 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	110 MPa	16000 psi	ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	69.0 MPa	10000 psi	Type I, 50 mm/min; ASTM D638
	73.0 MPa	10600 psi	50 mm/min; ISO 527
Elongation at Break	>= 25 %	>= 25 %	50 mm/min; ISO 527
	50 %	50 %	Type I, 50 mm/min; ASTM D638
Elongation at Yield	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D638
	7.0 %	7.0 %	50 mm/min; ISO 527

Tensile Modulus Mechanical Properties	2.40 GPa Metric	348 ksi English	1 mm/min; ISO 527 Comments
	2.55 GPa	370 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
	110 MPa	16000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
	2.51 GPa	364 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.100 J/cm	0.187 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*3; ISO 180/1A
	3.00 kJ/m ² @Temperature -30.0 °C	1.43 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	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
	9.00 J/cm ² @Temperature -30.0 °C	42.8 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.500 J/cm ² @Temperature -30.0 °C	2.38 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	72.0 J @Temperature 23.0 °C	53.1 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	70.0 µm/m-°C	38.9 µin/in-°F	

CTE, linear, Transverse to Flow Thermal Properties	Metric @ Temperature -40.0 - 95.0 °C	English @ Temperature -40.0 - 203 °F	ASTM E 831 Comments
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ASTM C177
	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	133 °C	271 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	132 °C	270 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	120 °C	248 °F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	121 °C	250 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	137 °C	279 °F	Rate B/50; ASTM D1525
	140 °C	284 °F	Rate B/50; ISO 306
	141 °C	286 °F	Rate B/120; ISO 306

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
	1.586	1.586	ISO 489

Descriptive Properties	Value	Comments
Erichson scratch depth, 6N	17micrometer	SABIC Method
Pencil Hardness test, 1kgf	HB	ASTM D3363

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