

SABIC Innovative Plastics Lexan® DMX1132 PC Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® DMX1132 is a high flow polycarbonate copolymer resin with improved ammonia resistance over regular polycarbonate resin. This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in ³	ISO 1183
	1.19 g/cc	0.0430 lb/in ³	ASTM D 792
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	36 g/10 min	36 g/10 min	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	
	38.5 g/10 min	38.5 g/10 min	ASTM D 1238
	@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 D 638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Tensile Strength, Yield	69.0 MPa	10000 psi	Type I, 50 mm/min; ASTM D 638
	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 D 638
Elongation at Yield	7.0 %	7.0 %	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments, ISO 527
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527
	2.55 GPa	370 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
	110 MPa	16000 psi	1.3 mm/min, 50 mm span; ASTM D 790
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 D 790
Izod Impact, Notched	0.100 J/cm	0.187 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	3.00 kJ/m ²	1.43 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 kJ/m ²	2.38 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 -30.0 °C	@Temperature -22.0 °F	
	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	9.00 J/cm ²	42.8 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.300 J/cm ²	1.43 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.500 J/cm ²	2.38 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Impact Test	72.0 J	53.1 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
	70.0 µm/m-°C	38.9 µin/in-°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@ Temperature 23.0 - 80.0 °C	@ Temperature 73.4 - 176 °F	ISO 11359-2
	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
CTE, linear, Transverse to Flow	@ Temperature 23.0 - 80.0 °C	@ Temperature 73.4 - 176 °F	ISO 11359-2
	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 95.0 °C	@Temperature -40.0 - 203 °F	
Thermal Conductivity	0.200 W/m-K	1.39 BTU-in/hr-ft ² -°F	ASTM C 177
	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 D 648
	@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 D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	137 °C	279 °F	Rate B/50; ASTM D 1525
	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 D 542
	1.586	1.586	ISO 489

Descriptive Properties	Value	Comments
Erichson scratch depth, 6N, micrometer	17	SABIC Method
Pencil Hardness test, 1kgf	HB	ASTM D 3363

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