

SABIC Innovative Plastics Lexan® DMX6014 PC Copolymer (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

DMX6014 is an injection moldable PC copolymer ABS blend. This resin combines excellent scratch resistance (F-pencil hardness) with ductility. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-DMX6014-PC-Copolymer-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.15 g/cc	1.15 g/cc	ASTM D 792
Density	1.15 g/cc	0.0415 lb/in ³	ISO 1183
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	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell L	90	90	ASTM D 785
Hardness, Rockwell R	117	117	ASTM D 785
Tensile Strength at Break	45.0 MPa	6530 psi	Type I, 50 mm/min; ASTM D 638
	48.0 MPa	6960 psi	50 mm/min; ISO 527
Tensile Strength, Yield	53.0 MPa	7690 psi	Type I, 50 mm/min; ASTM D 638
	55.0 MPa	7980 psi	50 mm/min; ISO 527
Elongation at Break	45 %	45 %	Type I, 50 mm/min; ASTM D 638
	50 %	50 %	50 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 50 mm/min; ASTM D 638
	5.5 %	5.5 %	50 mm/min; ISO 527
Tensile Modulus	2.15 GPa	312 ksi	1 mm/min; ISO 527

Mechanical Properties	2.40 GPa Metric	348 ksi English	5 mm/min; ASTM D 638 Comments
Flexural Yield Strength	75.0 MPa	10900 psi	1.3 mm/min, 50 mm span; ASTM D 790
	78.0 MPa	11300 psi	2 mm/min; ISO 178
Flexural Modulus	2.15 GPa	312 ksi	2 mm/min; ISO 178
	2.20 GPa	319 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.700 J/cm @Temperature -30.0 °C	1.31 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	2.20 J/cm @Temperature 23.0 °C	4.12 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	20.0 kJ/m² @Temperature 23.0 °C	9.52 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Charpy Impact, Notched	1.00 J/cm² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	2.00 J/cm² @Temperature 23.0 °C	9.52 ft-lb/in² @Temperature 73.4 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
Impact Test	55.0 J	40.6 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
Hot Ball Pressure Test	<= 100 °C	<= 212 °F	IEC 60695-10-2
Deflection Temperature at 0.46 MPa (66 psi)	113 °C	235 °F	Edgew 120*10*4 sp=100mm; ISO 75/Be
	113 °C @Thickness 3.20 mm	235 °F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	95.0 °C	203 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	97.0 °C @Thickness 3.20 mm	207 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	113 °C	235 °F	Rate B/50; ASTM D 1525
	113 °C	235 °F	Rate B/50; ISO 306

Thermal Properties	Metric	English	Comments
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	2nd value; UL 94
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	650 °C	1200 °F	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	700 °C	1290 °F	Glow Wire Ignitability Temperature; IEC 60695-2-13
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.8	2.8	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.0	3.0	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	3.0	3.0	IEC 60250
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	35.0 kV/mm	889 kV/in	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	47.0 kV/mm	1190 kV/in	in oil; IEC 60243-1
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Dissipation Factor	0.010	0.010	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.012	0.012	IEC 60250
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.030	0.030	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	

Descriptive Properties	Value	Comments
Ball Pressure Test, 75°C +/- 2°C	pass	IEC 60695-10-2

Descriptive Properties	Value	Comments
1, 6N, micrometer		
Pencil Hardness test, 1kgf	F	ASTM D 3363

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