SABIC Innovative Plastics Lexan® DMX9254 PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan* DMX9254 resin is an injection moldable PC copolymer/ABS blend. This resin combines excellent scratch resistance with high flow and ductility. It contains non-brominated and non-chlorinated flame retardant systems to meet UL-94 V0 at 1.5mm and V1 at 1.0mm.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-DMX9254-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.10 %	0.10 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.10 % @Temperature 23.0 °C	0.10 % @Temperature 73.4 °F	ISO 62
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	12 g/10 min @Load 2.16 kg, Temperature 260 °C	12 g/10 min @Load 4.76 lb, Temperature 500 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	15 g/10 min @Load 2.16 kg, Temperature 260 °C	15 g/10 min @Load 4.76 lb, Temperature 500 °F	ASTM D 1238
	25 g/10 min @Load 1.20 kg, Temperature 300 °C	25 g/10 min @Load 2.65 lb, Temperature 572 °F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	29 g/10 min @Load 1.20 kg, Temperature 300 °C	29 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	53.0 MPa	7690 psi	50 mm/min; ISO 527
	55.0 MPa	7980 psi	Type I, 50 mm/min; ASTM D 638
Tensile Strength, Yield	72.0 MPa	10400 psi	Type I, 50 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Elongation at Break	65 %	65 %	Type I, 50 mm/min; ASTM D 638
	75 %	75 %	50 mm/min; ISO 527
Elongation at Yield	4.7 %	4.7 %	50 mm/min; ISO 527
	4.8 %	4.8 %	Type I, 50 mm/min; ASTM D 638
Tensile Modulus	2.85 GPa	413 ksi	1 mm/min; ISO 527
	3.15 GPa	457 ksi	50 mm/min; ASTM D 638
Flexural Yield Strength	105 MPa	15200 psi	2 mm/min; ISO 178
	109 MPa	15800 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	2.70 GPa	392 ksi	2 mm/min; ISO 178
	2.75 GPa	399 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.250 J/cm @Temperature -30.0 °C	0.468 ft-lb/in @Temperature -22.0 °F	ASTM D 256
	0.420 J/cm @Temperature 23.0 °C	0.787 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Notched (ISO)	5.00 kJ/m² @Temperature -30.0 °C	2.38 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
	6.00 kJ/m² @Temperature 23.0 °C	2.86 ft-lb/in² @Temperature 73.4 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	53.0 kJ/m² @Temperature -30.0 °C	25.2 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1U
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	5.90 J/cm² @Temperature -30.0 °C	28.1 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm² @Temperature -30.0 °C	2.38 ft-lb/in² @Temperature -22.0 °F	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.700 J/cm²	3.33 ft-lb/in²	V-notch Edgew 80*10*3 sp=62mm;

Mechanical Properties	Metric	English	Comments
	@Temperature 23.0 °C	@Temperature 73.4 °F	ISO 179/1eA
Impact Test	56.0 J @Temperature 23.0 °C	41.3 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	60.0 µm/m-°C @Temperature -40.0 - 40.0 °C	33.3 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	98.0 °C	208 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	98.0 °C @Thickness 3.20 mm	208 °F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	88.0 °C	190 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	87.0 °C @Thickness 3.20 mm	189 °F @Thickness 0.126 in	unannealed; ASTM D 648
Vicat Softening Point	104 °C	219 °F	Rate B/50; ISO 306
	105 °C	221 °F	Rate B/50; ASTM D 1525
	107 °C	225 °F	Rate B/120; ISO 306
Flammability, UL94	V-1 @Thickness 1.00 mm	V-1 @Thickness 0.0394 in	UL 94
	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	UL 94

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

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