

LEXANT™ COPOLYMER MPX1

REGION ASIA

DESCRIPTION

Lexan® MPX1 polycarbonate (PC) siloxane copolymer resin is a UV stabilized injection molding (IM) grade with release properties. This resin offers good low temperature ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard IM PC resins. Lexan MPX1 resin is a general purpose product available in limited colors and may be an excellent candidate for a broad range of applications.

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	57	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	56	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4.8	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	90	%	ASTM D638
Tensile Modulus, 50 mm/min	2100	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	86	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	750	J/m	ASTM D256
Izod Impact, notched, -30°C	250	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	70	J	ASTM D3763
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	116	°C	ASTM D648
Ball Pressure Test, 125°C +/- 2°C	pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	80	°C	UL 746B
PHYSICAL ⁽¹⁾			
Specific Gravity	1.18	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm ⁽³⁾	0.4 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm ⁽³⁾	0.4 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	18	g/10 min	ASTM D1238
Density	1.19	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.12	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	17	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-102102564	-	-
UL Recognized, 94HB Flame Class Rating	≥0.5	mm	UL 94
Glow Wire Ignitability Temperature, 1.0 mm	850	°C	IEC 60695-2-13
Glow Wire Flammability Index, 1.0 mm	960	°C	IEC 60695-2-12

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

- (1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
- (3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article. The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.
- (4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

MORE INFORMATION

For curve data and CAE cards, please visit and register at <https://materialfinder.sabic-specialties.com>

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