



## LEXAN™ Resin ML7647K

### Asia Pacific: COMMERCIAL

Non FR Impact modified PC, excellent Fatigue performance with balanced Flow and impact. Available in Opaque only

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	530	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	550	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 50 mm/min	22200	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	880	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	21700	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 50 mm/min	52	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.3	%	ISO 527
Tensile Strain, break, 50 mm/min	94	%	ISO 527
Tensile Modulus, 1 mm/min	2150	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	86	MPa	ISO 178
Flexural Modulus, 2 mm/min	2160	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	78	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	73	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	703	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	57	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	45	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	138	°C	ASTM D 1525

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

(5) 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.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
HDT, 1.82 MPa, 3.2mm, unannealed	118	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.94E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.09E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.48E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	138	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D 1238
Density	1.19	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.26	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	11	cm <sup>3</sup> /10 min	ISO 1133

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
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

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