

LEXAN™ FR RESIN ML7667

REGION ASIA

DESCRIPTION

LEXAN ML7667 specialty polycarbonate (PC) resin is a 9% GF reinforced, UV stabilized, flame retarded injection molding grade. This medium flow specialty PC resin combines UL94 V0 @ 1.5mm, 5VB @ 3.0mm flame retardancy based on non-chlorine, non-bromine FR agents with excellent processability, improved release performance and good impact performance. This product is available in limited opaque colors only and may be an excellent candidate for a broad range of applications, i.e. electrical and electronic enclosure applications.

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	55	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	44	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	4.4	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	15	%	ASTM D 638
Tensile Modulus, 5 mm/min	3500	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	97	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	3150	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	54	MPa	ISO 527
Tensile Stress, break, 5 mm/min	46	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4.4	%	ISO 527
Tensile Strain, break, 5 mm/min	13	%	ISO 527
Tensile Modulus, 1 mm/min	3600	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	96	MPa	ISO 178
Flexural Modulus, 2 mm/min	3400	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	340	J/m	ASTM D 256
Izod Impact, notched, -30°C	150	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	40	J	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	25	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	25	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	15	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	146	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	135	°C	ASTM D 648
CTE, -40°C to 40°C, flow	4.7E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	4.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Ball Pressure Test, 125°C +/- 2°C	passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	145	°C	ISO 306
Vicat Softening Temp, Rate B/120	146	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	132	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.26	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.2 – 0.6	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	9	g/10 min	ASTM D 1238
Density	1.26	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.15	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.4	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	8	cm ³ /10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Comparative Tracking Index	175	V	IEC 60112
FLAME CHARACTERISTICS			
UL Compliant, 94HB Flame Class Rating 2nd value	0.75	mm	UL 94 by SABIC-IP
UL Compliant, 94V-0 Flame Class Rating	1.5	mm	UL 94 by SABIC-IP
UL Compliant, 94-5VB Rating	3	mm	UL 94 by SABIC-IP
Glow Wire Flammability Index 960°C, passes at	1.1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 2.5 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	48	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	310 – 330	°C	
Nozzle Temperature	305 – 325	°C	
Front - Zone 3 Temperature	310 – 330	°C	
Middle - Zone 2 Temperature	300 – 320	°C	
Rear - Zone 1 Temperature	290 – 310	°C	
Mold Temperature	80 – 115	°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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