

LEXAN™ ML7696 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

Limited Use. LEXAN resin ML7696 is a flame retardant polycarbonate grade with 30% glass fiber reinforcement.

General Information			
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Features	Flame Retardant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.43	g/cm ³	
--	1.44	g/cm ³	
Specific Volume	0.690	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/5.0 kg)	19	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.10 to 0.30	%	Internal Method
Water Absorption (Equilibrium, 23°C)	0.26	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Break)	95.0	MPa	ASTM D638
Tensile Elongation ² (Break)	2.0	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	6590	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	148	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	100	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1100	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	151	°C	
1.8 MPa, Unannealed, 6.40 mm	146	°C	
Vicat Softening Temperature	165	°C	ASTM D1525 ⁵
CLTE - Flow (-40 to 95°C)	2.2E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.22	W/m/K	ASTM C177
RTI Elec	120	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	19	kV/mm	ASTM D149
Arc Resistance ⁶	PLC 7		ASTM D495

Comparative Tracking Index (CTI)	PLC 5	UL 746	
High Amp Arc Ignition (HAI)	PLC 4	UL 746	
High Voltage Arc Tracking Rate (HVTR)	PLC 3	UL 746	
Hot-wire Ignition (HWI)	PLC 0	UL 746	
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.47 mm	V-1		
2.99 mm	V-0		
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	293 to 316	°C	
Middle Temperature	304 to 327	°C	
Front Temperature	316 to 338	°C	
Nozzle Temperature	310 to 332	°C	
Processing (Melt) Temp	316 to 338	°C	
Mold Temperature	82.2 to 116	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	Type I, 5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	Rate B (120°C/h), Loading 2 (50 N)		
6.	Tungsten Electrode		

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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