

LEXANT™ RESIN LS1

REGION AMERICAS

DESCRIPTION

LEXANT™ LS1 resin is a 20 MFR polycarbonate, MVR of 21. UV stabilized. UL94 HB rated. UL746C f1 rated. Low viscosity. For automotive lens applications. AMECA listed.

TYPICAL PROPERTY VALUES

Revision 20230525

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	125	%	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	96	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2340	MPa	ASTM D790
IMPACT			
Izod Impact, notched, 23°C	694	J/m	ASTM D256
Tensile Impact Strength, Type S	472	kJ/m²	ASTM D1822
Falling Dart Impact, 23°C	169	J	SABIC method
Instrumented Dart Impact Energy @ peak, 23°C	62	J	ASTM D3763
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	129	°C	ASTM D648
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	125	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.15	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	20	g/10 min	ASTM D1238
OPTICAL			
Light Transmission, 2.54 mm	88	%	ASTM D1003
ELECTRICAL			
Hot Wire Ignition {PLC}	4	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	1	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Yellow Card Link	E121562-220970	-	-
UL Recognized, 94HB Flame Class Rating	1.47	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	48	Hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 305	°C	
Nozzle Temperature	275 – 300	°C	
Front - Zone 3 Temperature	280 – 305	°C	
Middle - Zone 2 Temperature	270 – 295	°C	
Rear - Zone 1 Temperature	260 – 280	°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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