SALES PLASTICS.COM

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SABIC LEXAN™ 101

UL rated HB as of 10/97. 200 series recommended when V-2 rating required. Nonhalogenated, 7.0 MFR, for thicker sections without sinks.
Information provided by SABIC

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
	1.20 g/cc	1.20 g/cc	ASTM D792
Density	1.19 g/cc	0.0430 lb/in³	ASTM D792
Water Absorption	0.15 %	0.15 %	24 hours; ASTM D570
Moisture Absorption at Equilibrium	0.35 %	0.35 %	ASTM D570
	0.58 % @Temperature 100 °C	0.58 % @Temperature 212 °F	ASTM D570
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC method
Melt Flow	7.0 g/10 min @Load 1.20 kg, Temperature 300 °C	7.0 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Mechanical Properties	**Metric**	**English**	**Comments**
Hardness, Rockwell M	70	70	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	68.0 MPa	9860 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	50 mm/min; ASTM D638
Elongation at Break	135 %	135 %	50 mm/min; ASTM D638
Elongation at Yield	7.0 %	7.0 %	50 mm/min; ASTM D638
Flexural Yield Strength	97.0 MPa	14100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	2.34 GPa	339 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	9.07 J/cm	17.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	32.04 J/cm	60.02 ft-lb/in	ASTM D4812
Tensile Impact Strength	630 kJ/m²	300 ft-lb/in²	ASTM D1822
Dart Drop, Total Energy	64.0 J	47.2 ft-lb	peak; ASTM D3763
Falling Dart Impact	169 J	125 ft-lb	ASTM D3029
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044
Electrical Properties	**Metric**	**English**	**Comments**
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D257
Dielectric Constant	2.96 @Frequency 1e+6 Hz	2.96 @Frequency 1e+6 Hz	ASTM D150
	3.17 @Frequency 50.0 - 60.0 Hz	3.17 @Frequency 50.0 - 60.0 Hz	ASTM D150
Dielectric Strength	14.9 kV/mm @Thickness 3.20 mm	378 kV/in @Thickness 0.126 in	in air; ASTM D149
Dissipation Factor	0.00090 @Frequency 50.0 - 60.0 Hz	0.00090 @Frequency 50.0 - 60.0 Hz	ASTM D150

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	0.010 @Frequency 1e+6 Hz	0.010 @Frequency 1e+6 Hz	ASTM D150
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746A
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746A
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746A
Thermal Properties	**Metric**	**English**	**Comments**
CTE, linear, Parallel to Flow	68.4 µm/m-°C @Temperature -40.0 - 95.0 °C	38.0 µin/in-°F @Temperature -40.0 - 203 °F	ASTM E831
Specific Heat Capacity	1.25 J/g-°C	0.299 BTU/lb-°F	ASTM C 351
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ft²-°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	137 °C @Thickness 6.40 mm	279 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C @Thickness 6.40 mm	270 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	154 °C	309 °F	Rate B/50; ASTM D1525
UL RTI, Electrical	130 °C	266 °F	UL 746B
UL RTI, Mechanical with Impact	130 °C	266 °F	UL 746B
UL RTI, Mechanical without Impact	130 °C	266 °F	UL 746B
Flammability, UL94	HB @Thickness 0.710 mm	HB @Thickness 0.0280 in	UL 94
Optical Properties	**Metric**	**English**	**Comments**
Refractive Index	1.586	1.586	ASTM D542
Haze	1.0 % @Thickness 2.54 mm	1.0 % @Thickness 0.100 in	ASTM D1003
Transmission, Visible	88 % @Thickness 2.54 mm	88 % @Thickness 0.100 in	ASTM D1003

Processing Properties	**Metric**	**English**	**Comments**
Nozzle Temperature	305 - 325 °C	581 - 617 °F	Injection Molding
Zone 1	290 - 310 °C	554 - 590 °F	
Zone 2	300 - 320 °C	572 - 608 °F	
Zone 3	310 - 330 °C	590 - 626 °F	
Melt Temperature	310 - 330 °C	590 - 626 °F	
Mold Temperature	80.0 - 115 °C	176 - 239 °F	
Drying Temperature	120 °C	248 °F	Injection Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
	48.0 hour	48.0 hour	Cumulative; Injection Molding
Moisture Content	0.020 %	0.020 %	
Back Pressure	0.300 - 0.700 MPa	43.5 - 102 psi	
Shot Size	40 - 60 %	40 - 60 %	
Vent Depth	0.00250 - 0.00760 cm	0.000984 - 0.00299 in	
Screw Speed	40 - 70 rpm	40 - 70 rpm	