

LEXANTM COPOLYMER EXL9111

REGION ASIA

DESCRIPTION

LEXAN EXL9111 polycarbonate-Siloxane copolymer resin is a high flow, high impact, non-chlorinated, non-brominated flame retardant opaque injection molding (IM) grade.

TYPICAL PROPERTY VALUES

Revision 20190802

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Hardness, Rockwell L	92.2	-	ASTM D 785
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	54	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	76.4	%	ASTM D 638
Tensile Modulus, 50 mm/min	2387	MPa	ASTM D 638
Tensile Stress, yield	60	MPa	ISO 527
Tensile Stress, break	47	MPa	ISO 527
Tensile Strain, break	46.7	%	ISO 527
Tensile Strain, yield	4.5	%	ISO 527
Tensile Modulus, 1 mm/min	2347	MPa	ISO 527
Flexural Stress, yld, 1.3 mm/min, 50 mm span	96.7	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2440	MPa	ASTM D 790
Flexural Stress, break, 2 mm/min	93	MPa	ISO 178
Flexural Stress, brk, 1.3 mm/min, 50 mm span	95	MPa	ASTM D 790
Flexural Modulus, 2 mm/min	2314	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	753	J/m	ASTM D 256
Izod Impact, notched, -30°C	124	J/m	ASTM D 256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812
Instrumented Impact Total Energy, 23°C	62.5	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	62.3	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	51.3	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	104	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Charpy Impact, notched, 23°C	55.6	kJ/m ²	ISO 179/2C
Charpy Impact, notched, -30°C	12.9	kJ/m ²	ISO 179/2C
Charpy Impact, unnotched, 23°C	NB	kJ/m ²	ISO 179/2C
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	101	°C	ASTM D 648
HDT, 0.45 MPa, 3.2 mm, unannealed	111	°C	ASTM D 648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	103	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	112	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	126	°C	ASTM D 1525

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	117	°C	ISO 306
Vicat Softening Temp, Rate B/120	119	°C	ISO 306
CTE, -40°C to 40°C, flow	64.8	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	65.6	1/°C	ASTM E 831
Relative Temp Index, Elec ⁽¹⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽¹⁾	80	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽¹⁾	80	°C	UL 746B
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Density	1.18	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs	0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	0.62	%	ASTM D 955
Melt Flow Rate, 300°C/1.2 kgf	20	g/10 min	ASTM D 1238
Moisture Absorption (23°C / 50% RH)	0.43	%	ISO 62
ELECTRICAL			
Volume Resistivity	>1E+16	Ohm-cm	ASTM D 257
Surface Resistivity	>1E+16	Ohm	ASTM D 257
Dielectric Constant, 1.1 GHz	2.83	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0061	-	SABIC method
FLAME CHARACTERISTICS ⁽¹⁾			
UL Yellow Card Link	E207780-103826700	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.2	mm	UL 94
UL Recognized, 94V-1 Flame Class Rating	≥0.8	mm	UL 94
INJECTION MOLDING			
Drying Temperature	100	°C	
Drying Time	3 – 4	hrs	
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	275 – 295	°C	
Rear - Zone 1 Temperature	260 – 285	°C	
Mold Temperature	60 – 80	°C	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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