

LEXANTM COPOLYMER EXL9134

REGION AMERICAS

DESCRIPTION

LEXAN EXL9134 polycarbonate (PC) siloxane copolymer resin is a UV stabilized high flow opaque injection molding (IM) grade. This resin offers UL94 V0 @ 1.5mm flame retardancy based on non-bromine, non-chlorine FR systems, extreme low temperature ductility (-40 deg C) characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC.

LEXAN EXL9134 resin is a product available in a wide range of opaque colors and may be an excellent candidate for a wide range of applications.

TYPICAL PROPERTY VALUES

Revision 20200610

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	115	%	ASTM D 638
Tensile Modulus, 5 mm/min	2100	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	92	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2400	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	56	MPa	ISO 527
Tensile Stress, break, 50 mm/min	57	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	108	%	ISO 527
Tensile Modulus, 1 mm/min	2000	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	87	MPa	ISO 178
Flexural Modulus, 2 mm/min	2100	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	785	J/m	ASTM D 256
Izod Impact, notched, -30°C	655	J/m	ASTM D 256
Izod Impact, notched, -40°C	380	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	67	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	65	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	30	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	35	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	140	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.1E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.2E-05	1/°C	ASTM E 831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	6.1E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.2E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	139	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	118	°C	ISO 75/Af
Relative Temp Index, Elec ⁽¹⁾	125	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽¹⁾	115	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽¹⁾	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	16	g/10 min	ASTM D 1238
Density	1.19	g/cm ³	ISO 1183
Water Absorption, (23°C/saturated)	0.4	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	15	cm ³ /10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 3	≥0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 1	≥0.75	mm	UL 746A
FLAME CHARACTERISTICS ⁽¹⁾			
UL Yellow Card Link	E121562-522591	-	-
UL Yellow Card Link 2	E121562-536785	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	825	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	825	°C	IEC 60695-2-13
Glow Wire Flammability Index, 3.0 mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5 mm	960	°C	IEC 60695-2-12
UV-light, water exposure/immersion	F1	-	UL 746C
Glow Wire Flammability Index 960°C, passes at	≥1.5	mm	IEC 60695-2-12
INJECTION MOLDING			
Drying Temperature	120	°C	
Drying Time	3 – 4	hrs	
Drying Time (Cumulative)	48	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	270 – 295	°C	
Mold Temperature	70 – 95	°C	
Back Pressure	0.3 – 0.7	MPa	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

(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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