

# LEXAN™ COPOLYMER EXL8454

REGION ASIA

## DESCRIPTION

LEXAN EXL8454 is a PC/siloxane copolymer resin with medium flow, excellent low temperature impact and 50% post consumer recycle content. Limited availability and restricted color only. Higher color variability and contamination risks including black specs needs to be considered before approval for use in applications.

## TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	57	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	55	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D 638
Tensile Modulus, 5 mm/min	2200	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	800	J/m	ASTM D 256
Izod Impact, notched, -30°C	700	J/m	ASTM D 256
Izod Impact, notched, -40°C	650	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	70	J	ASTM D 3763
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	67	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	58	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -40°C, V-notch Edgew 80*10*3 sp=62mm	54	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	65	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	27	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	145	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D 1238
Water Absorption, 23°C/24hrs	0.15	%	SABIC method
<b>ELECTRICAL</b>			
Volume Resistivity	>1.E+15	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+15	Ohm	ASTM D 257
Dielectric Strength, in oil, 0.8 mm	15	kV/mm	ASTM D 149
Relative Permittivity, 1 MHz	3	-	ASTM D 150
Dissipation Factor, 1 MHz	0.0093	-	ASTM D 150

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<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating	0.75	mm	UL 94
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at	3	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
<b>INJECTION MOLDING</b>			
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	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

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