

LEXANTM COPOLYMER EXL8483

REGION ASIA

DESCRIPTION

LEXAN EXL8483 is a PC/siloxane copolymer resin with medium flow, excellent low temperature impact and 80% 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 20200226

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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
IMPACT			
Izod Impact, notched, 23°C	800	J/m	ASTM D 256
Izod Impact, notched, -30°C	650	J/m	ASTM D 256
Izod Impact, notched, -40°C	600	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	70	J	ASTM D 3763
THERMAL			
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
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	1.2	-	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
ELECTRICAL			
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
Hot-Wire Ignition (HWI), PLC 3	≥3	mm	UL 746A
FLAME CHARACTERISTICS ⁽¹⁾			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	<u>E207780-100651927</u>	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
Glow Wire Ignitability Temperature, 3.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.5 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 1.0 mm	875	°C	IEC 60695-2-13
Glow Wire Ignitability Temperature, 0.75 mm	850	°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	850	°C	IEC 60695-2-12
Glow Wire Flammability Index, 1.0 mm	850	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.75 mm	825	°C	IEC 60695-2-12
INJECTION MOLDING ⁽²⁾			
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 – 110	°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	

(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.

(2) Molding conditions are only mentioned as general guidelines, need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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