LEXAN™ COPOLYMER EXL9330P

REGION ASIA

DESCRIPTION

Opaque PC-Siloxane copolymer with excellent processability. Non-chlorinated, non-brominated flame retardant product in most colors. UV-stabilized. UL rated f1/V-0/5VA.

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	61	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	130	%	ASTM D638
Tensile Modulus, 50 mm/min	2100	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	88	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2060	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	125	%	ISO 527
Tensile Modulus, 1 mm/min	2100	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	85	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
Ball Indentation Hardness, H358/30	90	MPa	ISO 2039-1
IMPACT [1]			
Izod Impact, notched, 23°C	801	J/m	ASTM D256
Izod Impact, notched, -30°C	678	J/m	ASTM D256
Izod Impact, notched, -50°C	587	J/m	ASTM D256
Izod Impact, notched, 23°C, 6.4mm	641	J/m	ASTM D256
Izod Impact, double-gated, 23°C	1068	J/m	SABIC method
Instrumented Dart Impact Total Energy, 23°C	52	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	70	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 63.5*12.7*3.2, 23°C	80	kJ/m²	ISO 180/4A
Izod Impact, notched 63.5*12.7*3.2, -30°C	65	kJ/m²	ISO 180/4A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	75	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	60	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL [1]			
Vicat Softening Temp, Rate B/50	142	°C	ASTM D1525

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	134	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	124	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.66E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	6.66E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	7.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.7E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	140	°C	ISO 306
Vicat Softening Temp, Rate B/120	142	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	135	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	124	°C	ISO 75/Ae
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	115	°C	UL 746B
Relative Temp Index, Mech w/o impact	120	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.18	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [2]	0.4 – 0.8	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [2]	0.4 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
Density	1.19	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.35	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	ASTM D149
Dissipation Factor, 50/60 Hz	0.0024	-	ASTM D150
Dissipation Factor, 1 MHz	0.0085	-	ASTM D150
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ω.cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ω	IEC 60093
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.0085	-	IEC 60250
Comparative Tracking Index	225	V	IEC 60112
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS [1]			
UL Recognized, 94V-1 Flame Class Rating	0.8	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	1.49	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	2.99	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13
Oxygen Index (LOI)	35	%	ISO 4589
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING [3]			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.,The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER