

Product Texts

Lexan* EXL1444 polycarbonate (PC) siloxane copolymer resin is a medium flow opaque injection molding (IM) grade suitable for FDA compliant applications. This resin offers extreme low temperature (-40°C) ductility, exhibits excellent processability and release with opportunities for shorter IM cycle times compared to standard PC. Lexan EXL1444 resin is a product available in wide range of opaque colors and may be an excellent candidate for a wide variety of food contact applications.

UL Yellow Card Link [E121562-462648](https://www.ul.com/yellowcard/E121562-462648)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	9	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
ASTM Data			
Melt Flow Index, MFI	10	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2150	MPa	ISO 527
Yield stress	57	MPa	ISO 527
Yield strain	6	%	ISO 527
Stress at break	60	MPa	ISO 527
Strain at break	50	%	ISO 527
Flexural modulus	2250	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	70	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	65	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C	N	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C, 3mm	70	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	60	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2020	MPa	ASTM D 638
Tensile Strength at Yield	55	MPa	ASTM D 638
Tensile Strength at Break	50	MPa	ASTM D 638
Elongation at Yield	6	%	ASTM D 638
Elongation at Break	98	%	ASTM D 638
Flexural Modulus	2230	MPa	ASTM D 790
Rockwell Hardness	R 121	-	ASTM D 785
Izod Impact notched, 1/8 in	865	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	775	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	145	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	146	°C	ISO 306
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.7	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	875	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
ASTM Data			
DTUL @ 66 psi	140	°C	ASTM D 648
DTUL @ 264 psi	124	°C	ASTM D 648
Vicat Temperature	145	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	16.3	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	0.0093	-	ASTM D 150
Dielectric Constant, 1 MHz	2.64	-	ASTM D 150
Surface Resistivity	1E15	Ohm	ASTM D 257
Volume Resistivity	1E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Water absorption	0.35	%	Sim. to ISO 62
Humidity absorption	0.15	%	Sim. to ISO 62
Density	1190	kg/m ³	ISO 1183
Density	1180	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	295 - 315	°C	-
Mold temperature	70 - 95	°C	-
Zone 1	270 - 295	°C	-
Zone 2	280 - 305	°C	-
Zone 3	295 - 315	°C	-
Screw speed	40 - 70	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics

Processing

Injection Molding

Regional Availability

North America

Certifications

Food contact, Food approval FDA 21 CFR