

Product Texts

Lexan EXL5689 polycarbonate (PC) resin is a GF reinforced, UV stabilized, flame retardant injection molding copolymer blend. This medium flow resin features UL94 V0 @ 1.5mm flame retardancy based on non-chlorine, non-bromine FR agents with excellent processability and improved release performance. Lexan EXL5689 resin offers much improved impact strength and ductility over conventional GF reinforced PC resins. This product is an excellent candidate for a broad range of applications, including electrical and electronic enclosures among others.

UL Yellow Card Link [E45329-561961](https://www.ul.com/yellow-card/E45329-561961)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	8	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
ASTM Data			
Melt Flow Index, MFI	9	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3600	MPa	ISO 527
Yield stress	54	MPa	ISO 527
Yield strain	4.4	%	ISO 527
Stress at break	46	MPa	ISO 527
Strain at break	13	%	ISO 527
Flexural modulus	3400	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	30	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	15	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	25	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	10	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	3500	MPa	ASTM D 638
Tensile Strength at Yield	55	MPa	ASTM D 638
Tensile Strength at Break	44	MPa	ASTM D 638
Elongation at Yield	4.4	%	ASTM D 638
Elongation at Break	15	%	ASTM D 638
Flexural Modulus	3150	MPa	ASTM D 790
Izod Impact notched, 1/8 in	340	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	150	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 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Burning behav. at thickness h	V-1	class	IEC 60695-11-10
Thickness tested	1.2	mm	-
Glow Wire Flammability Index (GWFI)	825	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

ASTM Data

Vicat Temperature	146	°C	ASTM D 1525
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Electrical properties

	Value	Unit	Test Standard
ISO Data			
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Comparative tracking index	175	-	IEC 60112

Other properties

	Value	Unit	Test Standard
Water absorption	0.35	%	Sim. to ISO 62
Humidity absorption	0.15	%	Sim. to ISO 62
Density	1260	kg/m ³	ISO 1183
Density	1260	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	270 - 330	°C	-
Mold temperature	80 - 115	°C	-
Zone 1	250 - 310	°C	-
Zone 2	260 - 320	°C	-
Zone 3	270 - 330	°C	-
Screw speed	40 - 70	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics**Processing**

Injection Molding

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Regional Availability

North America, Europe, Asia Pacific, South and Central America