

Product Texts

LNP ELCRES EXL7414 is based on Polycarbonate (PC) siloxane copolymer resin. It is a medium flow, non-chlorinated, non-brominated flame retardant opaque grade. It offers excellent low temperature ductility (-40C), extremely thin wall flame retardant capability with UL94 V0 at 0.6mm, and in combination with excellent processability and release with opportunities for shorter cycle times compared to standard Polycarbonate. It is available in wide range of opaque colors and is an excellent candidate for a wide variety of applications such as the battery cover of fast-charging mobile phones that need to be compliant with IEC62368-1.

UL Yellow Card Link [E207780-104423704](https://www.ul.com/yellow-card/E207780-104423704)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	11	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
ASTM Data			
Melt Flow Index, MFI	12	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	54	MPa	ISO 527
Yield strain	5.2	%	ISO 527
Stress at break	61	MPa	ISO 527
Strain at break	50	%	ISO 527
Flexural modulus	2130	MPa	ISO 178
Charpy notched impact strength, +23°C, 3mm	78	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	69	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C, 3mm	73	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	65	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2120	MPa	ASTM D 638
Tensile Strength at Yield	53	MPa	ASTM D 638
Tensile Strength at Break	61	MPa	ASTM D 638
Elongation at Yield	5.3	%	ASTM D 638
Elongation at Break	120	%	ASTM D 638
Flexural Modulus	2150	MPa	ASTM D 790
Rockwell Hardness	R 117	-	ASTM D 785
Izod Impact notched, 1/8 in	900	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	700	J/m	ASTM D 256
Temperature	-40	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	108	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	119	°C	ISO 75-1/-2
Vicat softening temperature, B	123	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	124	°C	ISO 306
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.6	mm	-
Burning behav. 5V at thickness h	5VB	class	IEC 60695-11-20
Thickness tested	3.0	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	850	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
ASTM Data			
DTUL @ 66 psi	118	°C	ASTM D 648
DTUL @ 264 psi	105	°C	ASTM D 648

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Surface Resistivity	>1E15	Ohm	ASTM D 257
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Other properties	Value	Unit	Test Standard
Density	1200	kg/m ³	ISO 1183
Density	1200	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	110	°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

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Applications

Automotive

Regional Availability

North America, Europe, Asia Pacific