

## Product Texts

LNP ELCRIN CRX7416UB is an unfilled, amorphous Polycarbonate (PC) copolymer resin that offers medium flow, non-chlorinated/brominated flame retardant grade with major component synthesized from bio source. This grade is available in custom colors, has UL V0 rating @ 1 mm for all colors, 5VB rating at 2.5mm with high impact, including low temperature ductility and is UV stabilized. The grade has improved chemical resistance against a range of chemicals and may be an excellent candidate for a variety of consumer and industrial applications that need durability against chemicals.

UL Yellow Card [F45329-104555541](https://www.ul.com/yellow-card/F45329-104555541)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	12	cm <sup>3</sup> /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	13	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-
Mold Shrinkage, MD	0.0065	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.0065	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2000	MPa	ISO 527
Yield stress	50	MPa	ISO 527
Stress at break	57	MPa	ISO 527
Strain at break	100	%	ISO 527
Flexural modulus, 23°C	1950	MPa	ISO 178
Flexural strength	73	MPa	ISO 178
Charpy impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	65	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	52	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	72	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	64	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-30	°C	-
<b>ASTM Data</b>			
Tensile Modulus	2000	MPa	ASTM D 638
Tensile Strength at Yield	50	MPa	ASTM D 638
Tensile Strength at Break	57	MPa	ASTM D 638
Flexural Modulus	2050	MPa	ASTM D 790
Izod Impact notched, 1/8 in	680	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	540	J/m	ASTM D 256
Temperature	-30	°C	-
Izod Impact unnotched, 1/8 in	N	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	114	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	126	°C	ISO 75-1/-2
Vicat softening temperature, B	128	°C	ISO 306
Coeff. of linear therm. expansion, parallel	80	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Yellow Card available	yes	-	-
Burning behav. at thickness h	HB	class	IEC 60695-11-10

Thickness tested	0.6	mm	-
Yellow Card available	yes	-	-
Burning behav. 5V at thickness h	5VB	class	IEC 60695-11-20
Thickness tested	2.5	mm	-
Yellow Card available	yes	-	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.8	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	1.5	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.8	mm	-
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (3)	1.5	mm	-
<b>ASTM Data</b>			
UL 94 Flame rating	V-1	-	UL 94
Thickness tested	0.8	mm	-
Coefficient of Thermal Expansion, MD	80	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	80	E-6/K	ASTM D 696
DTUL @ 66 psi	126	°C	ASTM D 648
DTUL @ 264 psi	111	°C	ASTM D 648
Vicat Temperature	128	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Electric strength	33	kV/mm	IEC 60243-1
Comparative tracking index	225	-	IEC 60112
<b>ASTM Data</b>			
Dielectric Strength, Short Time	27	kV/mm	ASTM D 149
Surface Resistivity	>1E15	Ohm	ASTM D 257
Volume Resistivity	1E15	Ohm*cm	ASTM D 257
Arc Resistance	30	s	ASTM D 495

Other properties	Value	Unit	Test Standard
Water absorption	0.4	%	Sim. to ISO 62
Density	1190	kg/m <sup>3</sup>	ISO 1183
Density	1190	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	100 - 120	°C	-
Pre-drying - Time	2 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	280 - 320	°C	-
Mold temperature	70 - 100	°C	-
Zone 1	260 - 300	°C	-
Zone 2	270 - 310	°C	-
Zone 3	280 - 320	°C	-
Nozzle temperature	280 - 320	°C	-
Screw speed	50 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

## Characteristics

**Processing**

Injection Molding

**Special Characteristics**

Flame retardant, Halogen-free, High impact or impact modified

**Features**

Amorphous, Ductile, Copolymer

**Chemical Resistance**

General Chemical Resistance

**Certifications**

Contains renewable resources

**Applications**

IT / Business Machine

**Regional Availability**

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