

**Product Texts**

LNP ELCRIN WF0051iQ compound is based on Polybutylene terephthalate (PBT) resin utilizing ELCRIN iQ upcycling technology containing minimum 27% Post-Consumer Recycling (PCR) weight content and 25% glass fiber. Added features of this grade include: Non-Chlorinated, Non-Brominated Flame Retardant, UL94V0 and 5VA Flame Rating, Excellent Chemical Resistance. This is a good candidate for a variety of applications needing a more sustainable FR and PBT solution.

UL Yellow Card Link: [E45329-100063236](https://www.ul.com/yellow-card/E45329-100063236)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	20	cm <sup>3</sup> /10min	ISO 1133
Temperature	250	°C	-
Load	5	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	26	g/10min	ASTM D 1238
Temperature	250	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.004	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.012	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	9900	MPa	ISO 527
Nominal strain at break	1.6	%	ISO 527
Stress at break	95	MPa	ISO 527
Flexural modulus, 23°C	9100	MPa	ISO 178
Flexural strength	140	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	30	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C	25	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	4	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	9700	MPa	ASTM D 638
Elongation at Break	1.8	%	ASTM D 638
Flexural Modulus	9200	MPa	ASTM D 790
Flexural Strength	150	MPa	ASTM D 790
Izod Impact notched, 1/8 in	40	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	450	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	188	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	212	°C	ISO 75-1/-2
Vicat softening temperature, B	210	°C	ISO 306
Coeff. of linear therm. expansion, parallel	30	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.4	mm	-
Yellow Card available	yes	-	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	3.0	mm	-
Yellow Card available	yes	-	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature (GWIT)	750	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-

Glow Wire Ignition Temperature (GWIT)	<b>725</b>	°C	IEC 60695-2-13
GWIT - thickness tested (2)	<b>1.5</b>	mm	-
Glow Wire Ignition Temperature (GWIT)	<b>800</b>	°C	IEC 60695-2-13
GWIT - thickness tested (3)	<b>3</b>	mm	-
<b>ASTM Data</b>			
Coefficient of Thermal Expansion, MD	<b>30</b>	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	<b>80</b>	E-6/K	ASTM D 696
DTUL @ 66 psi	<b>213</b>	°C	ASTM D 648
DTUL @ 264 psi	<b>190</b>	°C	ASTM D 648
Vicat Temperature	<b>210</b>	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	<b>0.3</b>	%	Sim. to ISO 62
Humidity absorption	<b>0.06</b>	%	Sim. to ISO 62
Density	<b>1520</b>	kg/m <sup>3</sup>	ISO 1183
Density	<b>1520</b>	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	<b>110 - 120</b>	°C	-
Pre-drying - Time	<b>2 - 4</b>	h	-
Processing humidity	<b>≤0.02</b>	%	-
Melt temperature	<b>245 - 260</b>	°C	-
Mold temperature	<b>40 - 100</b>	°C	-
Zone 1	<b>230 - 240</b>	°C	-
Zone 2	<b>235 - 250</b>	°C	-
Zone 3	<b>240 - 260</b>	°C	-
Nozzle temperature	<b>230 - 255</b>	°C	-
Back pressure	<b>0.3 - 0.7</b>	MPa	-

## Characteristics

### Processing

Injection Molding

### Special Characteristics

Flame retardant, Halogen-free

### Chemical Resistance

General Chemical Resistance

### Certifications

Recycled Resin Content

### Applications

IT / Business Machine, Electrical and Electronical

### Regional Availability

Europe