

# LNPT<sup>™</sup> ELCRIN<sup>™</sup> WF006XXPIQ

ERO15800

## DESCRIPTION

LNP ELCRIN WF006XXPIQ compound is based on Polybutylene terephthalate (PBT) resin utilizing ELCRIN iQ upcycling technology containing minimum 38% Post-Consumer Recycling (PCR) weight content and 30% pre-consumer recycled glass fiber. Total sustainable content 67%. Added features of this grade include Excellent Strength, Stiffness, Dimensional Stability and Colorable. Potential applications may include handles, connectors.

GENERAL INFORMATION	
Features	Sustainable (Advanced Recycling), Dimensional stability, High stiffness/Strength, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

## TYPICAL PROPERTY VALUES

Revision 20250225

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, break, 5 mm/min	134	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Modulus, 1 mm/min	10500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	196	MPa	ISO 178
Flexural Modulus, 2 mm/min	9200	MPa	ISO 178
Tensile Stress, brk, Type I, 5 mm/min	137	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Modulus, 5 mm/min	10700	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	207	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	202	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	9400	MPa	ASTM D790
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, notched 80*10*4 +23°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	51	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched, 23°C	810	J/m	ASTM D4812
Izod Impact, notched, 23°C	84	J/m	ASTM D256
Izod Impact, notched, -30°C	73	J/m	ASTM D256
Instrumented Impact Total Energy, 23°C	8	J	ASTM D3763
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL <sup>(1)</sup></b>			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	213	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	196	°C	ISO 75/Af
Vicat Softening Temp, Rate B/50	206	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	204	°C	ISO 306
HDT, 0.45 MPa, 3.2 mm, unannealed	214	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	201	°C	ASTM D648
CTE, -40°C to 40°C, flow	2.3E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	9.3E-05	1/°C	ASTM E831
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.59	g/cm <sup>3</sup>	ISO 1183
Moisture Content	0.02	%	SABIC method
Melt Volume Rate, MVR at 250°C/5.0 kg	35	cm <sup>3</sup> /10 min	ISO 1133
Specific Gravity	1.60	-	ASTM D792
Mold Shrinkage, flow <sup>(2)</sup>	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow <sup>(2)</sup>	0.9 – 1.1	%	SABIC method
<b>ELECTRICAL</b>			
Dielectric Constant, 2.5 GHz	3.58	-	SABIC method
Dissipation Factor, 2.5 GHz	0.008	-	SABIC method
Dielectric Constant, 5 GHz	3.61	-	SABIC method
Dissipation Factor, 5 GHz	0.008	-	SABIC method
<b>FLAME CHARACTERISTICS <sup>(1)</sup></b>			
UL Yellow Card Link	<a href="#">E207780-104637766</a>	-	-
UL Recognized, 94HB Flame Class Rating <sup>(3)</sup>	≥0.84	mm	UL 94
<b>INJECTION MOLDING <sup>(1)</sup></b>			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 265	°C	
Nozzle Temperature	245 – 265	°C	
Front - Zone 3 Temperature	250 – 265	°C	
Middle - Zone 2 Temperature	245 – 260	°C	
Rear - Zone 1 Temperature	240 – 255	°C	
Mold Temperature	65 – 90	°C	
Back pressure (Plastic Pressure)	0.3 – 0.7	MPa	
Screw Speed	50 – 80	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded articles.

(3) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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