LNP™ ELCRIN™ WF006XXPiQ

ER015800

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	Advanced Recycling, Dimensional stability, High stiffness/Strength, No PFAS intentionally added (PCR contains <50ppm total organic fluorine content)
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polybutylene Terephthalate (PBT)
Processing Techniques	Injection Molding

TYPICAL PROPERTY VALUES

Revision 20260901

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Flexural Modulus, 1.3 mm/min, 50 mm span	9400	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	202	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	207	MPa	ASTM D790
Tensile Modulus, 5 mm/min	10700	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.8	%	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	137	MPa	ASTM D638
Flexural Modulus, 2 mm/min	9200	MPa	ISO 178
Flexural Stress, break, 2 mm/min	196	MPa	ISO 178
Tensile Modulus, 1 mm/min	10500	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.6	%	ISO 527
Tensile Stress, break, 5 mm/min	134	MPa	ISO 527
IMPACT [1]			
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	8	kJ/m²	ISO 179/1eA
Instrumented Impact Total Energy, 23°C	8	J	ASTM D3763
Izod Impact, notched, -30°C	73	J/m	ASTM D256
Izod Impact, notched, 23°C	84	J/m	ASTM D256
Izod Impact, unnotched, 23°C	810	J/m	ASTM D4812
Izod Impact, unnotched 80*10*4 +23°C	51	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 -30°C	8	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	8	kJ/m²	ISO 180/1A
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	201	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	214	°C	ASTM D648
Vicat Softening Temp, Rate B/50	204	°C	ISO 306
Vicat Softening Temp, Rate B/50	206	°C	ASTM D1525
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	196	°C	ISO 75/Af

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	213	°C	ISO 75/Bf
CTE			
-40°C to 40°C, flow	2.3E-05	1/°C	ASTM E831
-40°C to 40°C, xflow	9.3E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.59	g/cm³	ISO 1183
Moisture Content	0.02	%	SABIC method
Melt Volume Rate, MVR at 250°C/5.0 kg	35	cm³/10 min	ISO 1133
Specific Gravity	1.60	-	ASTM D792
Mold Shrinkage, flow [2]	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow [2]	0.9 – 1.1	%	SABIC method
ELECTRICAL			
Dielectric Constant			
@ 2.5 GHz	3.58	-	SABIC method
@ 5 GHz	3.61	-	SABIC method
Dissipation Factor			
@ 2.5 GHz	0.008	-	SABIC method
@ 5 GHz	0.008	-	SABIC method
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-104637766	-	-
UL Recognized, 94HB Flame Class Rating [3]	≥0.84	mm	UL 94
INJECTION MOLDING [1]			
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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