LNP™ ELCRIN™ 61000iQ

DESCRIPTION

LNP ELCRIN 61000iQ compound is based on Polycarbonate / Polybutylene Terephthalate (PC/PBT) blend utilizing ELCRIN iQ upcycling technology containing minimum 22% Post-Consumer Recycling (PCR) weight content. Added features of this grade include: Impact Modified, Excellent Low Temperature Impact, Chemical Resistant, Colorable.

GENERAL INFORMATION	
Features	Chemical Resistance, Sustainable (Advanced Recycling), Impact resistant, Low temperature impact, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate + PBT (PC+PBT)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20260901

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	45	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	46	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	140	%	ASTM D638
Tensile Modulus, 50 mm/min	2050	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	74	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2000	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	49	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	150	%	ISO 527
Tensile Modulus, 1 mm/min	1950	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	70	MPa	ISO 178
Flexural Modulus, 2 mm/min	1920	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	650	J/m	ASTM D256
Izod Impact, notched, -30°C	600	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	50	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	47	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m²	ISO 179/1eA

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	99	°C	ASTM D648
CTE, -40°C to 150°C, flow	9E-05	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	9.5E-05	1/°C	ASTM E831
CTE, -30°C to 80°C, flow	9.E-05	1/°C	ISO 11359-2
CTE, -30°C to 80°C, xflow	9.5E-05	1/°C	ISO 11359-2
Relative Temp Index, Elec [2]	75	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	75	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	75	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.19	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm [3]	0.8 – 1.2	%	SABIC method
Melt Flow Rate, 250°C/5.0 kgf	13	g/10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.3	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.08	%	ISO 62
Melt Volume Rate, MVR at 250°C/5.0 kg	12	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-100803460	-	-
UL Yellow Card Link 2	E45329-100103616	-	-
UL Recognized, 94HB Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	110	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 275	°C	
Nozzle Temperature	250 – 265	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	245 – 265	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Mold Temperature	40 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 80	rpm	
Shot to Cylinder Size	50 – 80	%	
Vent Depth	0.013 – 0.02	mm	

(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) 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

(3) 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 article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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