

LNPTM ELCRINTM DF0036RCC

DESCRIPTION

LNP ELCRIN DF0036RCC compound is based on recycled Polycarbonate (PC) resin containing 15% glass fiber. Added features of this grade include: Low Warpage, Good Ductility, Good Processability, Non-Brominated & Non-Chlorinated Flame Retardant, Light Blocking at 0.5mm, High Reflective white & opaque black. Post-Consumer Recycling (PCR) Polycarbonate content up to 50%.

GENERAL INFORMATION	
Features	Flame Retardant, Good Processability, Low Warpage, Sustainable (Mechanical Recycling), Non Cl/Br flame retardant, Impact resistant
Fillers	Glass Fiber
Brands	LNPTM ELCRINTM
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Modulus, 1 mm/min	4480	MPa	ISO 527
Tensile Stress, yield, 5 mm/min	73	MPa	ISO 527
Tensile Stress, break, 5 mm/min	71	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.5	%	ISO 527
Tensile Strain, break, 5 mm/min	2.8	%	ISO 527
Flexural Modulus, 2 mm/min	4650	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	125	MPa	ISO 178
Tensile Modulus, 5 mm/min	4460	MPa	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	73	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	69	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.6	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	3.3	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	4540	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	125	MPa	ASTM D790
IMPACT ⁽¹⁾			
Izod Impact, notched 80*10*4 +23°C	6	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	30	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	5	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	36	kJ/m ²	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	64	J/m	ASTM D256
Izod Impact, unnotched, 23°C	480	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	20	J	ASTM D3763
Instrumented Dart Impact Energy @ peak, 23°C	17	J	ASTM D3763
Instrumented Dart Impact Peak Force, 23°C	2500	N	ASTM D3763
THERMAL ⁽¹⁾			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	120	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	126	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	127	°C	ISO 306
Vicat Softening Temp, Rate B/120	129	°C	ISO 306
HDT, 1.82 MPa, 3.2mm, unannealed	120	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	125	°C	ASTM D648
Vicat Softening Temp, Rate B/50	128	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	130	°C	ASTM D1525
CTE, 23°C to 50°C, flow	3.1E-05	1/°C	ASTM E831
CTE, 23°C to 50°C, xflow	8.4E-05	1/°C	ASTM E831
Relative Temp Index, Elec ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽²⁾	80	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽²⁾	80	°C	UL 746B
PHYSICAL ⁽¹⁾			
Density	1.33	g/cm ³	ISO 1183
Melt Flow Rate, 300°C/1.2 kgf	11	g/10 min	ASTM D1238
Water Absorption, (23°C/24hrs)	0.1	%	ISO 62-1
Mold Shrinkage, flow	0.1 – 0.3	%	SABIC method
Mold Shrinkage, xflow	0.2 – 0.4	%	SABIC method
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm ³ /10 min	ISO 1133
Specific Gravity	1.34	-	ASTM D792
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-104464193	-	-
UL Recognized, 94V-0 Flame Class Rating	≥1.5	mm	UL 94
INJECTION MOLDING ⁽³⁾			
Drying Time	110	Hrs	
Drying Time	4 – 6	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	285 – 310	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 300	°C	
Nozzle Temperature	285 – 305	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.1 – 0.3	MPa	
Screw Speed	30 – 90	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) 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) 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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