LNP™ ELCRIN™ RCX7246K

DESCRIPTION

LNP ELCRIN RCX7246K is an impact modified Polycarbonate (PC) containing 65% PCR content with non-brominated and non-chlorinated FR intended for thin-wall applications requiring excellent impact/flow balance performance. No PFAS intentionally added.

GENERAL INFORMATION	
Features	High Flow, Mechanical Recycling, Non Cl/Br flame retardant, Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Mobile Phone - Computer - Tablets, Printer Copier, Wireless Communication
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20260617

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	54	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4.4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 5 mm/min	2250	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	85	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2350	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	54	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.3	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	2230	MPa	ISO 527
Flexural Strength, 2 mm/min	83	MPa	ISO 178
Flexural Modulus, 2 mm/min	2350	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	750	J/m	ASTM D256
Izod Impact, notched, -30°C	420	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	28	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*3 +23°C	52	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	20	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	52	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	29	kJ/m²	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	50	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	18.5	kJ/m²	ISO 179/1eA
Instrumented Dart Impact Total Energy, 23°C	58	J	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	110	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	97	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	108	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	7.30E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.30E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate A/50	120	°C	ISO 306
Vicat Softening Temp, Rate B/50	113	°C	ISO 306
Vicat Softening Temp, Rate B/120	114	°C	ISO 306
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]			
Specific Gravity	1.2	-	ASTM D792
Melt Flow Rate			
260°C/2.16 kgf	17	g/10 min	ASTM D1238
280°C/2.16 kgf	32	g/10 min	ASTM D1238
Melt Volume Rate			
300°C/1.2 kg	16	cm³/10 min	ISO 1133
260°C/2.16 kg	30	cm³/10 min	ISO 1133
Mold Shrinkage, flow, 3.2 mm [3]	0.5 – 0.9	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [3]	0.5 – 0.9	%	SABIC method
Water Absorption, (23°C/saturated)	0.1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.03	%	ISO 62
ELECTRICAL [1]			
Dielectric Constant			
1.1 GHz	2.93	-	SABIC method
1.9 GHz	2.89	-	SABIC method
5 GHz	2.88	-	SABIC method
10 GHz	2.88	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0068	-	SABIC method
1.9 GHz	0.0067	-	SABIC method
5 GHz	0.0065	-	SABIC method
10 GHz	0.0068	-	SABIC method

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E207780-10954511	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING [4]			
Drying Temperature	90 – 100	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 305	°C	
Nozzle Temperature	250 – 300	°C	
Front - Zone 3 Temperature	250 – 300	°C	
Middle - Zone 2 Temperature	245 – 295	°C	
Rear - Zone 1 Temperature	240 – 290	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	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) 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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