LNP™ ELCRIN™ DMX6034RCC

DESCRIPTION

ELCRIN DMX6034RCC is an improved scratch resistant polycarbonate copolymer that contains 20% Post consumer recycle content. This medium flow, UV stabilized, custom colorable resin is an excellent candidate for wide variety of electronics, consumer, and industrial applications that require improved scratch resistance.

GENERAL INFORMATION	
Features	Impact resistant, Weatherable/UV stable, No PFAS intentionally added (PCR contains <50ppm total organic fluorine content)
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure

TYPICAL PROPERTY VALUES

Revision 20250606

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	93	%	ISO 527
Tensile Modulus, 1 mm/min	2068	MPa	ISO 527
Flexural Modulus, 2 mm/min	2120	MPa	ISO 178
Flexural Stress, yield, 2 mm/min	86	MPa	ISO 178
Tensile Modulus, 50 mm/min	2190	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	75	%	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	59	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	61	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2100	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	97	MPa	ASTM D790
Pencil Hardness test, 0.5 kgf	F	-	ASTM D3363
Hardness, Rockwell M	62	-	ASTM D785
IMPACT [1]			
Izod Impact, notched 80*10*3 +23°C	37	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	72	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	178	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	183	kJ/m²	ISO 180/1U

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	40	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	297	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	262	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	515	J/m	ASTM D256
Izod Impact, notched, 0°C	258	J/m	ASTM D256
Izod Impact, notched, -30°C	116	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Instrumented Dart Impact Total Energy, 23°C	67	J	ASTM D3763
THERMAL [1]			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	112	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	117	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	131	°C	ASTM D648
Vicat Softening Temp, Rate B/50	136	°C	ISO 306
Vicat Softening Temp, Rate B/120	138	°C	ISO 306
Vicat Softening Temp, Rate B/50	136	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	138	°C	ASTM D1525
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.7E-05	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.16	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/24 hrs)	0.06	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.11	%	ASTM D570
Mold Shrinkage, flow, 24 hrs [2]	0.5 – 0.8	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	0.5 – 0.8	%	ASTM D955
Specific Gravity	1.17	-	ASTM D792
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm³/10 min	ISO 1133
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm³/10 min	ASTM D1238
INJECTION MOLDING [3]			
Drying Temperature	110	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	290 – 310	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Front - Zone 3 Temperature	290 – 310	°C	
Nozzle Temperature	290 – 310	°C	
Mold Temperature	60 – 85	°C	

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(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 article.

(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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