

LNPT[™] ELCREST[™] FXM2271

DESCRIPTION

LNP ELCRES FXM2271 is based on Polycarbonate (PC) copolymer resin with excellent weatherability and special metallic color visual effects, improved anti-scratch or anti-mar performance (color package may affect certain properties). It is targeted for applications like electronics covers, mobility exteriors, interiors, trims or other adjacent paint-free applications.

GENERAL INFORMATION	
Features	Aesthetics/Visual effects, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Lighting, Automotive Exteriors
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20231117

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	61	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	64	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	98	%	ASTM D638
Tensile Modulus, 50 mm/min	2342	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	92	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2370	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	58	MPa	ISO 527
Tensile Strain, break, 50 mm/min	84	%	ISO 527
Tensile Modulus, 1 mm/min	2371	MPa	ISO 527
Flexural Strength, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2370	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	128	J/m	ASTM D256
Izod Impact, notched, -30°C	98.7	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched 80*10*3 +23°C	12.7	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	10	kJ/m ²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	13.4	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	10.5	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	70.4	J	ASTM D3763
THERMAL ⁽¹⁾			
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	120.7	°C	ISO 75/Af
CTE			
-30°C to 85°C, flow	7E-5	1/°C	ISO 11359-2
-30°C to 85°C, xflow	7E-5	1/°C	ISO 11359-2
PHYSICAL ⁽¹⁾			
Specific Gravity	1.21	-	ASTM D792
Density	1.2	g/cm ³	ISO 1183
Melt Flow Rate, 300°C/1.2 kgf	19	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	17	cm ³ /10 min	ISO 1133
Mold Shrinkage, flow ⁽²⁾	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow ⁽²⁾	0.5 – 0.7	%	SABIC method
INJECTION MOLDING ⁽³⁾			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Hopper Temperature	60 – 80	°C	
Melt Temperature	280 – 310	°C	
Nozzle Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 310	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	80 – 110	°C	

(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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