

LNPT[™] ELCREST[™] FXM9111T

DESCRIPTION

ELCRES FXM9111T PC-siloxane copolymer resin is an injection molding grade, Non-chlorinated, non-brominated flame retardant product. This resin offers room temp ductility in combination with high flow characteristics and excellent processability with opportunities for shorter injection molding cycle times comparing to standard PC. Available for VisualFx capability in "metallic" colors: sparkle appearance featured. Fine metallic appearance is limited. ELCRES FXM9111T resin may be an excellent candidate for a broad range of applications, including but not limited to Automotive, Appliances, Electronics, etc. Color package may affect performance.

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 Interiors
Consumer	Consumer Goods, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets

TYPICAL PROPERTY VALUES

Revision 20240607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	67	%	ASTM D638
Tensile Modulus, 50 mm/min	2400	MPa	ASTM D638
Flexural Stress at 5% strain, 1.3 mm/min, 50 mm span	83	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	89	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2170	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	74	%	ISO 527
Tensile Modulus, 1 mm/min	2480	MPa	ISO 527
Flexural Stress at 3.5% strain, 2 mm/min	60.8	MPa	ISO 178
Flexural Strain, break, 2 mm/min	9.2	%	ISO 178
Flexural Strength, 2 mm/min	87	MPa	ISO 178
Flexural Modulus, 2 mm/min	1877	MPa	ISO 178
IMPACT ⁽¹⁾			
Izod Impact, notched, 23°C	425	J/m	ASTM D256
Izod Impact, notched 80*10*4 +23°C	33	kJ/m ²	ISO 180/1A

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, unnotched 80*10*4 +23°C	180	kJ/m ²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	36	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	130	kJ/m ²	ISO 179/1eU
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	122	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	110	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	110	°C	ISO 75/Af
CTE, -40°C to 95°C, flow	7.50E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	8.04E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	8.01E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.51E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate A/50	127	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	127	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	128	°C	ISO 306
Vicat Softening Temp, Rate B/120	127	°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
Density	1.2	g/cm ³	ISO 1183
Water Absorption, (23°C/24hrs)	0.12	%	ISO 62-1
Moisture Absorption, (23°C/50% RH/24hrs)	0.04	%	ISO 62-4
Melt Flow Rate, 300°C/1.2 kgf	18.5	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	17.7	cm ³ /10 min	ASTM D1238
Mold Shrinkage, flow ⁽³⁾	0.51	%	SABIC method
Mold Shrinkage, xflow ⁽³⁾	0.5	%	SABIC method
FLAME CHARACTERISTICS ⁽²⁾			
UL Yellow Card Link	E207780-104688369	-	-
UL Recognized, 94V-0 Flame Class Rating	≥2.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	90	°C	
Drying Time	3 – 4	Hrs	
Nozzle Temperature	250 – 285	°C	
Front - Zone 3 Temperature	250 – 285	°C	
Middle - Zone 2 Temperature	250 – 285	°C	
Rear - Zone 1 Temperature	250 – 285	°C	
Mold Temperature	50 – 90	°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) 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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