LNP™ ELCRES™ FXP1430

DESCRIPTION

ELCRES FXP1430 is PC-siloxane copolymer in special "Lustre Plus" pearlescent appearance, which is part of the VisualFx family. This product features vivid and resplendent look with improved ductility and medium flow. UV stabilized. Color package may affect performance. Applications include housing of consumer electronics, cosmetic packaging, automotive interior decoration, etc.

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

INDUSTRY	SUB INDUSTRY
Automotive	Automotive EV Batteries, Automotive Interiors
Consumer	Home Decoration, Sport/Leisure, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20231109

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	56	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.2	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	79	%	ASTM D638
Tensile Modulus, 50 mm/min	2150	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	94	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	94	MPa	ASTM D790
Flexural Stress at 5% strain, 1.3 mm/min, 50 mm span	87	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2240	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	61	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.3	%	ISO 527
Tensile Strain, break, 50 mm/min	87	%	ISO 527
Tensile Modulus, 1 mm/min	2080	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	92	MPa	ISO 178
Flexural Strength, 2 mm/min	92	MPa	ISO 178
Flexural Stress at 3.5% strain, 2 mm/min	68.9	MPa	ISO 178
Flexural Modulus, 2 mm/min	2150	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	2170	J/m	ASTM D4812

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched, 23°C	578	J/m	ASTM D256
Izod Impact, notched, 0°C	131	J/m	ASTM D256
Izod Impact, notched, -10°C	129	J/m	ASTM D256
Izod Impact, unnotched 80*10*4 +23°C	181	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	14.4	kJ/m²	ISO 180/1A
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	131.6	kJ/m²	ISO 179/1eU
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	20.8	kJ/m²	ISO 179/1eA
THERMAL (1)			
HDT, 0.45 MPa, 3.2 mm, unannealed	127	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	113	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	129	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	114	°C	ISO 75/Af
Vicat Softening Temp, Rate A/50	142	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	135	°C	ASTM D1525
Vicat Softening Temp, Rate B/50	133	°C	ISO 306
Vicat Softening Temp, Rate B/120	133.5	°C	ISO 306
CTE, -40°C to 95°C, flow	7.0E-05	1/°C	ASTM E831
CTE, -40°C to 95°C, xflow	8.1E-05	1/°C	ASTM E831
CTE, 23°C to 80°C, flow	7.9E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.7E-05	1/°C	ISO 11359-2
PHYSICAL (1)			
Specific Gravity	1.185	-	ASTM D792
Melt Flow Rate, 300°C/1.2 kgf	12	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	11.7	cm³/10 min	ASTM D1238
Moisture Absorption, (23°C/50% RH/24hrs)	0.037	%	ISO 62-4
Water Absorption, (23°C/24hrs)	0.15	%	ISO 62-1
Mold Shrinkage, flow (2)	0.72	%	SABIC method
Mold Shrinkage, xflow (2)	0.75	%	SABIC method
INJECTION MOLDING (3)			
Drying Temperature	120	°C	
Drying Time	3 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	295 – 315	°C	
Nozzle Temperature	290 – 310	°C	
Front - Zone 3 Temperature	295 – 315	°C	
Middle - Zone 2 Temperature	280 – 305	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Mold Temperature	70 – 95	°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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