LNP™ ELCRES™ FXM1838

DESCRIPTION

LNP ELCRES FXM1838 is based on Polycarbonate (PC) copolymer resin with excellent flowability, UV stabilized in special metallic colors (color package may affect certain properties). It is targeted for applications like mobility exteriors, trims or other adjacent pain-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 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	53	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	54	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	84	%	ASTM D638
Tensile Modulus, 50 mm/min	2242	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	93	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2162	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	58	MPa	ISO 527
Tensile Stress, break, 50 mm/min	59	MPa	ISO 527
Tensile Strain, break, 50 mm/min	90	%	ISO 527
Tensile Modulus, 1 mm/min	2240	MPa	ISO 527
Flexural Strength, 2 mm/min	92	MPa	ISO 178
Flexural Modulus, 2 mm/min	2228	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	112	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched 80*10*3 +23°C	8	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Instrumented Dart Impact Total Energy, 23°C	57.5	J	ASTM D3763
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	111	°C	ISO 75/Af
CTE			
-30°C to 85°C, flow	6.9E-5	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
-30°C to 85°C, xflow	7.1E-5	1/°C	ISO 11359-2
PHYSICAL [1]			
Specific Gravity	1.19	-	ASTM D792
Density	1.19	g/cm³	ISO 1183
Melt Flow Rate, 300°C/1.2 kgf	39	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 300°C/1.2 kg	40	cm³/10 min	ISO 1133
Mold Shrinkage, flow [2]	0.2 – 0.7	%	SABIC method
Mold Shrinkage, xflow [2]	0.2 – 0.7	%	SABIC method
INJECTION MOLDING [3]			
Drying Temperature	105 – 110	°C	
Drying Time	3 – 4	Hrs	
Hopper Temperature	50 – 80	°C	
Melt Temperature	260 – 305	°C	
Nozzle Temperature	255 – 300	°C	
Front - Zone 3 Temperature	260 – 305	°C	
Middle - Zone 2 Temperature	250 – 295	°C	
Rear - Zone 1 Temperature	240 – 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.

DISCLAIMER