LNP™ ELCRES™ SLX2271AML

DESCRIPTION

LNP ELCRES SLX2271AML is a polycarbonate (PC) copolymer resin containing antimicrobial additives. It has excellent weatherability and good scratch resistance performance, and available in transparent or tinted colors, fit for wide range of electronics, mobility or other adjacent applications.

GENERAL INFORMATION	
Features	Scratch Resistance, Weatherable/UV stable, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Consumer Goods, Personal Accessory, Home Appliances, Personal Recreation
Electrical and Electronics	Mobile Phone - Computer - Tablets
Hygiene and Healthcare	Personal and Professional Hygiene
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	61.9	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	61.3	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	93	%	ASTM D638
Tensile Modulus, 5 mm/min	2368	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	102	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2360	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	61.6	MPa	ISO 527
Tensile Stress, break, 50 mm/min	62	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	99.7	%	ISO 527
Tensile Modulus, 1 mm/min	2382	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	82.3	MPa	ISO 178
Flexural Modulus, 2 mm/min	2487	MPa	ISO 178
IMPACT [1]			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, notched, 23°C	119	J/m	ASTM D256
Izod Impact, notched, -30°C	89.5	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	66.1	J	ASTM D3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*3 +23°C	13.5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9.3	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	13.6	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9.2	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL (1)			
Vicat Softening Temp, Rate B/50	140	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D648
CTE, -40°C to 40°C, flow	7.5E-5	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7.5E-5	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	7.7E-5	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.6E-5	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	141	°C	ISO 306
PHYSICAL (1)			
Specific Gravity	1.2	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm (2)	0.5 – 0.8	%	SABIC method
Melt Flow Rate, 300°C/1.2 kgf	20	g/10 min	ASTM D1238
Density	1.2	g/cm³	ISO 1183
Melt Volume Rate, MVR at 300°C/1.2 kg	22	cm³/10 min	ISO 1133
INJECTION MOLDING (3)			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
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	
Hopper Temperature	60 – 80	°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