LNP™ ELCRIN™ SLX1271DB

DESCRIPTION

LNP ELCRIN SLX1271DB is a low viscosity, weatherable polycarbonate copolymer blend with enhanced UV stabilization available in diffusive colors with major component synthesized from bio-source. It offers the potential for selective plating on PC/ABS in intricate geometries via a 2K molding process. The material is targeted for automotive exterior applications.

GENERAL INFORMATION	
Additives	UV-Stabilizer
Features	High Flow, UV-C resistant, Bio-Renewable, Aesthetics/Visual effects, Weatherable/UV stable
Polymer Types	Polycarbonate (PC)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Exteriors
Electrical and Electronics	Lighting

TYPICAL PROPERTY VALUES

Revision 20260908

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	2256	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	66	MPa	ISO 527
Tensile Stress, break, 50 mm/min	68	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6.2	%	ISO 527
Tensile Strain, break, 50 mm/min	115	%	ISO 527
Flexural Modulus, 2 mm/min	2255	MPa	ISO 178
Flexural Strength, 2 mm/min	97	MPa	ISO 178
Tensile Modulus, 5 mm/min	2292	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	6.3	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	83	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2480	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	98	MPa	ASTM D790
IMPACT [1]			
Izod impact, notched			
80*10*3 +23°C	10	kJ/m²	ISO 180/1A
80*10*3 0°C	9	kJ/m²	ISO 180/1A
80*10*3 -30°C	7	kJ/m²	ISO 180/1A
23°C	239	J/m	ASTM D256
0°C	99	J/m	ASTM D256
-30°C	98	J/m	ASTM D256

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	8	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	7	kJ/m²	ISO 179/1eA
Multi-Axial Instrumented Impact Total Energy, 23°C (2)	110	J	ISO 6603-2
Multi-Axial Instrumented Impact Total Energy, -30°C (2)	108	J	ISO 6603-2
Instrumented Dart Impact Total Energy, 23°C (2)	57	J	ASTM D3763
Instrumented Dart Impact Peak Force, 23°C (2)	5900	N	ASTM D3763
THERMAL (1)			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	123	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75/Bf
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
CTE, 23°C to 50°C, flow	7.1E-05	1/°C	ISO 11359-2
CTE, 23°C to 50°C, xflow	7.2E-05	1/°C	ISO 11359-2
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D648
Vicat Softening Temp, Rate B/50	138	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	139	°C	ASTM D1525
CTE, 23°C to 50°C, flow	7.1E-05	1/°C	ASTM E831
CTE, 23°C to 50°C, xflow	7.2E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.21	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.15	%	ISO 62-4
Water Absorption, (23°C/saturated)	0.32	%	ISO 62-1
Melt Volume Rate, MVR at 300°C/1.2 kg	16	cm³/10 min	ASTM D1238
Specific Gravity	1.2	-	ASTM D792
Melt Flow Rate, 300°C/1.2 kgf	18	g/10 min	ASTM D1238
Mold Shrinkage, flow (3)	0.75	%	SABIC method
INJECTION MOLDING (4)			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	280 – 310	°C	
Rear - Zone 1 Temperature	260 – 280	°C	
Middle - Zone 2 Temperature	270 – 290	°C	
Front - Zone 3 Temperature	280 – 310	°C	
Nozzle Temperature	270 – 290	°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) 4.4 m/s

(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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