LNP™ ELCRES™ CRX1524U

DESCRIPTION

LNP™ ELCRES™ CRX1524U is a semi-crystalline PC Copolymer/PBT blend. This higher flow resin offers excellent chemical resistance in combination with high ductility and UV stability. HB rated and available for custom colors. This grade is intended for a wide variety of opaque healthcare applications that require improved chemical resistance.

TYPICAL PROPERTY VALUES

Revision 20250610

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 50 mm/min	45	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	36	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	100	%	ASTM D638
Tensile Modulus, 50 mm/min	1816	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	69	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	1750	MPa	ASTM D790
Tensile Stress, yield, 50 mm/min	44	MPa	ISO 527
Tensile Stress, break, 50 mm/min	37	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	100	%	ISO 527
Tensile Modulus, 1 mm/min	1784	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	66	MPa	ISO 178
Flexural Modulus, 2 mm/min	1810	MPa	ISO 178
IMPACT [1]			
Instrumented Impact Total Energy, 23°C [2]	57	J	ASTM D3763
Instrumented Dart Impact Ductility, 23°C [2]	100	%	ASTM D3763
Izod Impact, notched, 23°C	853	J/m	ASTM D256
Izod Impact, notched, -30°C	650	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	83	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	147	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	162	kJ/m²	ISO 179/1eU
Izod Impact, notched 80*10*3 +23°C	70	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	64	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*3 +23°C	145	kJ/m²	ISO 180/1U
THERMAL [1]			
CTE, -40°C to 40°C, flow	9.64E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.07E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	9.64E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.07E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	113	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	116	°C	ASTM D1525

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Vicat Softening Temp, Rate B/50	116	°C	ISO 306
Vicat Softening Temp, Rate B/120	118	°C	ISO 306
HDT, 1.82 MPa, 3.2 mm	71	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	107	°C	ASTM D648
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	69	°C	ISO 75/Af
PHYSICAL (1)			
Specific Gravity	1.22	-	ASTM D792
Water Absorption, 23°C/24hrs	.12	%	SABIC method
Moisture Absorption (23°C / 50% RH)	.05	%	ISO 62
Mold Shrinkage, flow (3)	0.7 – 1.3	%	SABIC method
Mold Shrinkage, xflow (3)	0.6 – 1.3	%	SABIC method
Density	1.22	g/cm³	ISO 1183
Melt Volume Rate, MVR at 265°C/5.0 kg	29	cm³/10 min	ASTM D1238
Melt Flow Rate, 265°C/5.0 kgf	30	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 265°C/5.0 kg	29	cm³/10 min	ISO 1133
ELECTRICAL			
Dielectric Constant			
2.46 GHz	2.82	-	SABIC method
100 MHz	2.93	-	SABIC method
Dissipation Factor			
2.46 GHz	0.0063	-	SABIC method
100 MHz	0.0078	-	SABIC method
FLAME CHARACTERISTICS (4)			
UL Recognized, 94HB Flame Class Rating	1	mm	UL 94
UL Yellow Card Link	E121562-104642369	-	-
INJECTION MOLDING (5)			
Drying Temperature	120	°C	
Drying Time	2 – 4	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	255 – 275	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Middle - Zone 2 Temperature	245 – 265	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Nozzle Temperature	255 – 275	°C	
Mold Temperature	50 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	50 – 100	rpm	
Vent Depth	0.025 – 0.038	mm	

(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) at 3.3 m/s dart speed
(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) 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.
(5) 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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