LNP™ ELCRES™ CX1600

DESCRIPTION

LNP ELCRES CX1600 Polycarbonate/Acrylonitrile Butadiene Styrene (ABS), siloxane copolymer (PC/ABS/EXL) blend is an injection moldable, medium flow grade. This grade is available in a wide range of opaque colors and is a good candidate for thin wall applications.

GENERAL INFORMATION	
Features	Chemical Resistance, Good Processability, High Flow, Hydrolytic Stability, Enhanced mold release, High temperature resistance, Impact resistant, Low temperature impact
Fillers	Unreinforced
Polymer Types	Polycarbonate + ABS (PC+ABS)
Processing Techniques	Injection Molding

TYPICAL PROPERTY VALUES

Revision 20250606

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 1 mm/min	2250	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
Tensile Stress, break, 50 mm/min	50	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Nominal Strain, break, 50 mm/min	80	%	ISO 527
Flexural Modulus, 2 mm/min	2340	MPa	ISO 178
Flexural Strength, 2 mm/min	85	MPa	ISO 178
Tensile Modulus, 50 mm/min	2340	MPa	ASTM D638
Tensile Stress, yld, Type I, 50 mm/min	55	MPa	ASTM D638
Tensile Stress, brk, Type I, 50 mm/min	50	MPa	ASTM D638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D638
Tensile Nominal Strain, brk, Type I, 50 mm/min	79	%	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	2260	MPa	ASTM D790
Flexural Strength, 1.3 mm/min, 50 mm span	85	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	55	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	21	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	54	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	23	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Izod Impact, notched, 23°C	598	J/m	ASTM D256
Izod Impact, notched, -30°C	263	J/m	ASTM D256
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D4812
Izod Impact, unnotched, -30°C	NB	J/m	ASTM D4812
THERMAL [1]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	111	°C	ISO 75/Af
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	128	°C	ISO 75/Bf
HDT, 1.82 MPa, 3.2mm, unannealed	111	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	127	°C	ASTM D648
Vicat Softening Temp, Rate B/50	132	°C	ISO 306
Vicat Softening Temp, Rate B/120	133	°C	ISO 306
Vicat Softening Temp, Rate B/50	132	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	133	°C	ASTM D1525
CTE, -40°C to 40°C, flow	7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, flow	7E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	7E-05	1/°C	ASTM E831
PHYSICAL (1)			
Density	1.18	g/cm³	ISO 1183
Moisture Absorption, (23°C/50% RH/Equilibrium)	0.06	%	ISO 62-4
Water Absorption, (23°C/saturated)	0.04	%	ISO 62-1
Water Absorption, (23°C/24hrs)	0.07	%	ISO 62-1
Mold Shrinkage, flow (2)	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow (2)	0.5 – 0.7	%	SABIC method
Melt Volume Rate, MVR at 250°C/5.0 kg	18	cm³/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/2.16 kg	10	cm³/10 min	ISO 1133
Specific Gravity	1.18	-	ASTM D792
Melt Flow Rate, 250°C/5.0 kgf	18	g/10 min	ASTM D1238
INJECTION MOLDING (3)			
Drying Temperature	100 – 110	°C	
Drying Time	2 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.02	%	
Hopper Temperature	40 – 80	°C	
Melt Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	230 – 280	°C	
Middle - Zone 2 Temperature	240 – 290	°C	
Front - Zone 3 Temperature	250 – 300	°C	
Nozzle Temperature	240 – 290	°C	
Mold Temperature	60 – 90	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw speed (Circumferential speed)	0.15 – 0.25	m/s	

(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. 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.

(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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