LNP™ ELCRES™ EXL9818

PC | Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP ELCRES EXL9818 is opaque Copolymer Polycarbonate resin with added features of good Processability, good Modulus and heat resistance. It is non-chlorine and non-bromine flame retardant material with UL-94 FR rating of 5VA/2.5mm, V0/1.5mm.

UL Yellow Card E207780-104560205

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**20**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**21**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Mold Shrinkage, MD	**0.007**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.007**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2480**	MPa	ISO 527
Yield stress	**61**	MPa	ISO 527
Yield strain	**5.5**	%	ISO 527
Stress at break	**58**	MPa	ISO 527
Strain at break	**92**	%	ISO 527
Flexural modulus, 23°C	**2450**	MPa	ISO 178
Flexural strength	**92**	MPa	ISO 178
Charpy impact strength, +23°C	**133**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**132**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**62**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**16**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**181**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**64**	kJ/m²	ISO 180/1A
Izod notched impact strength	**16**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**2520**	MPa	ASTM D 638
Tensile Strength at Yield	**61**	MPa	ASTM D 638
Tensile Strength at Break	**60**	MPa	ASTM D 638
Elongation at Yield	**5.5**	%	ASTM D 638
Elongation at Break	**92**	%	ASTM D 638
Flexural Modulus	**2410**	MPa	ASTM D 790
Flexural Strength	**90**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**765**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**132**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**2130**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**120**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**132**	°C	ISO 75-1/-2
Vicat softening temperature, B	**138**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**67**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**74**	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
Yellow Card available	**yes**	-	-

Burning behav. 5V at thickness h	**5VB**	class	IEC 60695-11-20
Thickness tested	**1.5**	mm	-
Yellow Card available	**yes**	-	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**2.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**2.5**	mm	-
ASTM Data			
Coefficient of Thermal Expansion, MD	**64**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**68**	E-6/K	ASTM D 696
DTUL @ 66 psi	**131**	°C	ASTM D 648
DTUL @ 264 psi	**119**	°C	ASTM D 648
Vicat Temperature	**138**	°C	ASTM D 1525

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Comparative tracking index	**212**	-	IEC 60112
ASTM Data			
Surface Resistivity	**1E16**	Ohm	ASTM D 257
Volume Resistivity	**1E16**	Ohm*cm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.36**	%	Sim. to ISO 62
Humidity absorption	**0.17**	%	Sim. to ISO 62
Density	**1210**	kg/m³	ISO 1183
Density	**1220**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**290 - 310**	°C	-
Mold temperature	**70 - 95**	°C	-
Zone 1	**265 - 290**	°C	-
Zone 2	**275 - 300**	°C	-
Zone 3	**290 - 310**	°C	-
Nozzle temperature	**280 - 305**	°C	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Flame retardant, Halogen-free, Heat stabilized or stable to heat, Opaque

Features
Copolymer

Applications
Automotive, IT / Business Machine, Electrical and Electronical

Regional Availability
North America, Europe, Asia Pacific, South and Central America