LNP™ ELCRIN™ EXL9414PB

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

ELCRIN EXL9414PB polycarbonate (PC) siloxane copolymer resin is a medium flow, non-chlorinated, non-brominated flame retardant opaque injection molding (IM) grade with major component synthesized from Bio source. This resin offers low temperature ductility (-30°C), thin wall flame retardant capability (UL94 V0 @0.8mm), and in combination with excellent processability and release with opportunities for shorter IM cycle times compared to standard PC. ELCRIN EXL9414PB copolymer resin is a product available in wide range of opaque colors and may be an excellent candidate for a wide variety of applications, especially the housing of fast-charging mobile phones.

UL Yellow Card E207780-104263177

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**12**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**13.5**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Mold Shrinkage, MD	**0.006**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.006**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2110**	MPa	ISO 527
Yield stress	**56**	MPa	ISO 527
Yield strain	**4.9**	%	ISO 527
Strain at break	**63**	%	ISO 527
Flexural modulus, 23°C	**2180**	MPa	ISO 178
Flexural strength	**86**	MPa	ISO 178
Charpy notched impact strength, +23°C	**81**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**48**	kJ/m²	ISO 179/1eA
Izod notched impact strength, +23°C	**77**	kJ/m²	ISO 180/1A
Izod notched impact strength	**51**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**2117**	MPa	ASTM D 638
Tensile Strength at Yield	**55**	MPa	ASTM D 638
Tensile Strength at Break	**89**	MPa	ASTM D 638
Elongation at Yield	**5.3**	%	ASTM D 638
Flexural Modulus	**2200**	MPa	ASTM D 790
Flexural Strength	**90**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**962**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**670**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**111**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**124**	°C	ISO 75-1/-2
Vicat softening temperature, B	**137**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**91.1**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**95.4**	E-6/K	ISO 11359-1/-2
Burning behav. at thickness h	**V-0**	class	IEC 60695-11-10
Thickness tested	**0.8**	mm	-
Yellow Card available	**yes**	-	-
Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-

ASTM Data			
Coefficient of Thermal Expansion, MD	**77.1**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**83.4**	E-6/K	ASTM D 696
DTUL @ 66 psi	**123**	°C	ASTM D 648
DTUL @ 264 psi	**110**	°C	ASTM D 648

Other properties	Value	Unit	Test Standard
Density	**1190**	kg/m³	ISO 1183
Density	**1190**	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	**295 - 315**	°C	-
Mold temperature	**70 - 95**	°C	-
Zone 1	**270 - 295**	°C	-
Zone 2	**280 - 305**	°C	-
Zone 3	**295 - 315**	°C	-
Nozzle temperature	**290 - 310**	°C	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Flame retardant, Halogen-free, Opaque

Features
Ductile, Copolymer

Certifications
Contains renewable resources

Applications
IT / Business Machine, Electrical and Electronical

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