LNP™ ELCRES™ CRX7416U

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP ELCRES CRX7416U is an unfilled, amorphous Polycarbonate (PC) copolymer resin that offers medium flow, non-chlorinated/brominated flame retardant grade. This grade is available in custom colors, has UL V0 rating @ 1 mm for all colors, 5VB rating at 2.5mm with high impact, including low temperature ductility and is UV stabilized. The grade has improved chemical resistance against a range of chemicals and may be an excellent candidate for a variety of consumer and industrial applications that need durability against chemicals

UL Yellow Card E45329-104555541

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**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Mold Shrinkage, MD	**0.0065**	mm/mm	ASTM D 955
Mold Shrinkage, TD	**0.0065**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2000**	MPa	ISO 527
Yield stress	**50**	MPa	ISO 527
Stress at break	**57**	MPa	ISO 527
Strain at break	**100**	%	ISO 527
Flexural modulus, 23°C	**1950**	MPa	ISO 178
Flexural strength	**73**	MPa	ISO 178
ASTM Data			
Tensile Modulus	**2000**	MPa	ASTM D 638
Tensile Strength at Yield	**50**	MPa	ASTM D 638
Tensile Strength at Break	**57**	MPa	ASTM D 638
Flexural Modulus	**2050**	MPa	ASTM D 790

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**114**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**126**	°C	ISO 75-1/-2
Vicat softening temperature, B	**128**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**80**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**80**	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. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested	**0.6**	mm	-
Yellow Card available	**yes**	-	-
Burning behav. 5V at thickness h	**5VB**	class	IEC 60695-11-20
Thickness tested	**2.5**	mm	-
Yellow Card available	**yes**	-	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**0.8**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**1**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (3)	**1.5**	mm	-
Glow Wire Ignition Temperature (GWIT)	**800**	°C	IEC 60695-2-13

GWIT - thickness tested (1)	**0.8**	mm	-
Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13
GWIT - thickness tested (2)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**800**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**1.5**	mm	-
ASTM Data			
UL 94 Flame rating	**V-1**	-	UL 94
Thickness tested	**0.8**	mm	-
Coefficient of Thermal Expansion, MD	**80**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**80**	E-6/K	ASTM D 696
DTUL @ 66 psi	**126**	°C	ASTM D 648
DTUL @ 264 psi	**111**	°C	ASTM D 648
Vicat Temperature	**128**	°C	ASTM D 1525

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Electric strength	**33**	kV/mm	IEC 60243-1
Comparative tracking index	**225**	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	**27**	kV/mm	ASTM D 149
Surface Resistivity	**>1E15**	Ohm	ASTM D 257
Volume Resistivity	**1E15**	Ohm*cm	ASTM D 257
Arc Resistance	**30**	s	ASTM D 495

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.4**	%	Sim. to ISO 62
Density	**1190**	kg/m³	ISO 1183
Density	**1190**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**100 - 120**	°C	-
Pre-drying - Time	**2 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**280 - 320**	°C	-
Mold temperature	**70 - 100**	°C	-
Zone 1	**260 - 300**	°C	-
Zone 2	**270 - 310**	°C	-
Zone 3	**280 - 320**	°C	-
Nozzle temperature	**280 - 320**	°C	-
Screw speed	**50 - 100**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Flame retardant, Halogen-free, High impact or impact modified, U.V. stabilized or stable to weather

Features
Amorphous, Ductile, Copolymer

Chemical Resistance
General Chemical Resistance

Applications
IT / Business Machine

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