LNP™ ELCRES™ SD3038

PC | Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP ELCRES SD3038 is a compound based on Copolymer Polycarbonate resin with good processability and excellent notched impact performance. This grade offers extreme enhanced Low Temperature Ductility (-70°C) and available for wide variety of applications.

UL Yellow Card E207780-104559944

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**9.5**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**11**	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	**2130**	MPa	ISO 527
Yield stress	**56**	MPa	ISO 527
Yield strain	**6**	%	ISO 527
Stress at break	**59**	MPa	ISO 527
Strain at break	**120**	%	ISO 527
Flexural modulus, 23°C	**2230**	MPa	ISO 178
Flexural strength	**87**	MPa	ISO 178
Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**72**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**65**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**72**	kJ/m²	ISO 180/1A
Izod notched impact strength	**62**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**2000**	MPa	ASTM D 638
Tensile Strength at Yield	**56**	MPa	ASTM D 638
Tensile Strength at Break	**52**	MPa	ASTM D 638
Elongation at Yield	**6**	%	ASTM D 638
Elongation at Break	**100**	%	ASTM D 638
Flexural Modulus	**2200**	MPa	ASTM D 790
Flexural Strength	**91**	MPa	ASTM D 790
Rockwell Hardness	**L 89**	-	ASTM D 785
Izod Impact notched, 1/8 in	**870**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**780**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**128**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**140**	°C	ISO 75-1/-2
Vicat softening temperature, B	**145**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**72**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**72**	E-6/K	ISO 11359-1/-2
ASTM Data			
UL 94 Flame rating	**HB**	-	UL 94
Thickness tested	**0.4**	mm	-

Coefficient of Thermal Expansion, MD	**70**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**74.7**	E-6/K	ASTM D 696
DTUL @ 66 psi	**139**	°C	ASTM D 648
DTUL @ 264 psi	**124**	°C	ASTM D 648
Vicat Temperature	**145**	°C	ASTM D 1525

Electrical properties	**Value**	**Unit**	**Test Standard**
ASTM Data			
Surface Resistivity	**>1E15**	Ohm	ASTM D 257
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.35**	%	Sim. to ISO 62
Humidity absorption	**0.15**	%	Sim. to ISO 62
Density	**1190**	kg/m³	ISO 1183
Density	**1180**	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

Applications
Automotive, Building Construction, Electrical and Electronical

Features
Ductile, Copolymer

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