LNP™ ELCRIN™ BD2031

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LNP ELCRIN BD2031 is polycarbonate (PC) Bio base copolymer transparent resin, with medium flow, synthesized from Bio source. This resin offers excellent low temperature ductility (-30□), UV stabilized, available for injection molding and extrusion process.

BD2031 resin is a product for a wide variety of applications, such as big size and thin wall applications, or transparent/lower birefringence needed applications.

UL Yellow Card E207780-104559498

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**6.5**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**7.5**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Mold Shrinkage, MD	**0.006**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2070**	MPa	ISO 527
Yield stress	**58**	MPa	ISO 527
Yield strain	**6**	%	ISO 527
Stress at break	**72**	MPa	ISO 527
Strain at break	**140**	%	ISO 527
Flexural modulus, 23°C	**2060**	MPa	ISO 178
Flexural strength	**88**	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	**81**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**68**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**71**	kJ/m²	ISO 180/1A
Izod notched impact strength	**62**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**2250**	MPa	ASTM D 638
Tensile Strength at Yield	**56**	MPa	ASTM D 638
Tensile Strength at Break	**66**	MPa	ASTM D 638
Elongation at Yield	**6**	%	ASTM D 638
Elongation at Break	**140**	%	ASTM D 638
Flexural Modulus	**2230**	MPa	ASTM D 790
Flexural Strength	**96**	MPa	ASTM D 790
Rockwell Hardness	**R 120**	-	ASTM D 785
Izod Impact notched, 1/8 in	**960**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**890**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**115**	°C	ISO 75-1/-2
Vicat softening temperature, B	**130**	°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 thickness h	**HB**	class	IEC 60695-11-10
Thickness tested	**0.8**	mm	-
Yellow Card available	**yes**	-	-

ASTM Data			
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	**125**	°C	ASTM D 648
DTUL @ 264 psi	**114**	°C	ASTM D 648
Vicat Temperature	**135**	°C	ASTM D 1525

Optical properties	Value	Unit	Test Standard
ASTM Data			
Haze	**1**	%	ASTM D 1003
Light Transmittance	**88**	%	ASTM D 1003
Index of Refraction	**1.58**	-	ASTM D 542

Other properties	Value	Unit	Test Standard
Water absorption	**0.3**	%	Sim. to ISO 62
Humidity absorption	**0.15**	%	Sim. to ISO 62
Density	**1200**	kg/m³	ISO 1183
Density	**1200**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**105 - 110**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Melt temperature	**260 - 305**	°C	-
Mold temperature	**50 - 80**	°C	-
Zone 1	**240 - 280**	°C	-
Zone 2	**250 - 295**	°C	-
Zone 3	**260 - 305**	°C	-
Nozzle temperature	**255 - 300**	°C	-
Screw speed	**35 - 75**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding, Other Extrusion

Special Characteristics
High impact or impact modified, U.V. stabilized or stable to weather, Transparent

Features
Ductile, Low Birefringence, Copolymer

Certifications
Contains renewable resources

Applications
Automotive, IT / Business Machine, Electrical and Electronical

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