LEXAN™ Copolymer DMX2415

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LEXAN DMX2415 is a standard flow Polycarbonate (PC) copolymer resin with improved scratch resistance. This is available in transparent, translucent, and opaque colors.

UL Yellow Card Link1: E207780-100081393
UL Yellow Card Link2: E121562-539761
UL Yellow Card Link3: E45329-100081388

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**13**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**14.5**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-
Mold Shrinkage, MD	**0.0065**	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2450**	MPa	ISO 527
Yield stress	**80**	MPa	ISO 527
Yield strain	**7**	%	ISO 527
Stress at break	**60**	MPa	ISO 527
Strain at break	**40**	%	ISO 527
Flexural modulus, 23°C	**2450**	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	**47**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	**3**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	**3**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**5**	kJ/m²	ISO 180/1A
Izod notched impact strength	**4**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
Ball indentation hardness	**128**	MPa	ISO 2039-1
ASTM Data			
Tensile Modulus	**2900**	MPa	ASTM D 638
Tensile Strength at Yield	**80**	MPa	ASTM D 638
Tensile Strength at Break	**65**	MPa	ASTM D 638
Elongation at Yield	**7**	%	ASTM D 638
Elongation at Break	**70**	%	ASTM D 638
Flexural Modulus	**2600**	MPa	ASTM D 790
Rockwell Hardness	**L 108**	-	ASTM D 785
Taber Abrasion Resistance	**10**	mg/1000 cycles	ASTM D 1044
Izod Impact notched, 1/8 in	**30**	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	**N**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**118**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**131**	°C	ISO 75-1/-2
Vicat softening temperature, B	**138**	°C	ISO 306
Coeff. of linear therm. expansion, parallel	**70**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**70**	E-6/K	ISO 11359-1/-2
Glow Wire Flammability Index (GWFI)	**900**	°C	IEC 60695-2-12
GWFI - thickness tested (1)	**1**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
GWFI - thickness tested (2)	**2**	mm	-
Glow Wire Ignition Temperature (GWIT)	**825**	°C	IEC 60695-2-13

GWIT - thickness tested (1)	**1**	mm	-
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	**70**	E-6/K	ASTM D 696
DTUL @ 66 psi	**133**	°C	ASTM D 648
DTUL @ 264 psi	**119**	°C	ASTM D 648
Vicat Temperature	**139**	°C	ASTM D 1525
Thermal Conductivity, solid state	**0.2**	W/(m K)	ASTM C 177
Specific Heat	**1.4**	J/(kg K)	ASTM C 351

Electrical properties	**Value**	**Unit**	**Test Standard**
ISO Data			
Comparative tracking index	**325**	-	IEC 60112
ASTM Data			
Dielectric Strength, Short Time	**27**	kV/mm	ASTM D 149
Dielectric Constant, 60 Hz	**2.9**	-	ASTM D 150
Dielectric Constant, 1 MHz	**2.8**	-	ASTM D 150
Volume Resistivity	**1E14**	Ohm*cm	ASTM D 257

Optical properties	**Value**	**Unit**	**Test Standard**
ASTM Data			
Haze	**0.8**	%	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	**0.27**	%	Sim. to ISO 62
Humidity absorption	**0.13**	%	Sim. to ISO 62
Density	**1170**	kg/m³	ISO 1183
Water Absorption, 24hr	**0.08**	%	ASTM D 570
Water Absorption, Equilibrium	**0.13**	%	ASTM D 570
Density	**1170**	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	-
Feed temperature	**60 - 80**	°C	-
Zone 1	**260 - 280**	°C	-
Zone 2	**280 - 305**	°C	-
Zone 3	**295 - 315**	°C	-
Nozzle temperature	**290 - 310**	°C	-

Characteristics

Processing
Injection Molding

Applications
Automotive, Electrical and Electronical, Sports Equipment

Special Characteristics
Transparent, Opaque, Translucent

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

Features
Scratch Resistant, Copolymer