LEXAN™ FR Resin DMX1214

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LEXAN DMX1214 is a standard flow Polycarbonate (PC) copolymer resin. Available in both transparent and custom colours, this grade is a good candidate for 5G related devices. Added features of this grade include: Improved Scratch Resistance and Improved Dielectric Performance (lower Df).

UL Yellow Card E121562-613857

UL Yellow Card E45329-100081386

UL Yellow Card E207780-100081391

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**16**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**17.1**	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	**2400**	MPa	ISO 527
Yield stress	**77**	MPa	ISO 527
Yield strain	**8**	%	ISO 527
Stress at break	**62**	MPa	ISO 527
Strain at break	**60**	%	ISO 527
Flexural modulus, 23°C	**2310**	MPa	ISO 178
Flexural strength	**101**	MPa	ISO 178
Charpy impact strength, +23°C	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**133**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**3**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**3**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C	**6**	kJ/m²	ISO 180/1A
Izod notched impact strength	**4**	kJ/m²	ISO 180/1A
Temperature	**-30**	°C	-
ASTM Data			
Tensile Modulus	**2830**	MPa	ASTM D 638
Tensile Strength at Yield	**77**	MPa	ASTM D 638
Tensile Strength at Break	**64**	MPa	ASTM D 638
Elongation at Yield	**7**	%	ASTM D 638
Elongation at Break	**92**	%	ASTM D 638
Flexural Modulus	**2630**	MPa	ASTM D 790
Flexural Strength	**116**	MPa	ASTM D 790
Izod Impact notched, 1/8 in	**37**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**32**	J/m	ASTM D 256
Temperature	**-30**	°C	-
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	**121**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**134**	°C	ISO 75-1/-2
Vicat softening temperature, B	**141**	°C	ISO 306

Coeff. of linear therm. expansion, parallel	**60**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	**60**	E-6/K	ISO 11359-1/-2
ASTM Data			
UL 94 Flame rating	**HB**	-	UL 94
Thickness tested	**0.75**	mm	-
Coefficient of Thermal Expansion, MD	**60**	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	**60**	E-6/K	ASTM D 696
DTUL @ 66 psi	**133**	°C	ASTM D 648
DTUL @ 264 psi	**121**	°C	ASTM D 648
Vicat Temperature	**138**	°C	ASTM D 1525

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	**0.3**	%	Sim. to ISO 62
Humidity absorption	**0.14**	%	Sim. to ISO 62
Density	**1170**	kg/m³	ISO 1183
Water Absorption, 24hr	**0.1**	%	ASTM D 570
Water Absorption, Equilibrium	**0.14**	%	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

Special Characteristics
Transparent

Features
Scratch Resistant, Copolymer

Applications
Automotive, IT / Business Machine, Electrical and Electronical, Medical

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