LEXAN™ Copolymer EXL1414 - Americas

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

LEXAN EXL1414 polycarbonate (PC) siloxane copolymer resin is a medium flow opaque injection molding (IM) grade. This resin offers extreme low temperature (-40 C) ductility in combination with excellent processability and release with opportunities for shorter IM cycle times compared to standard PC. LEXAN EXL1414 resin is a product available in wide range of opaque colors and may be an excellent candidate for a wide variety of applications.

UL Yellow Card Link E121562-575795

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**9**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
ASTM Data			
Melt Flow Index, MFI	**10**	g/10min	ASTM D 1238
Temperature	**300**	°C	-
Load	**1.2**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2150**	MPa	ISO 527
Yield stress	**57**	MPa	ISO 527
Yield strain	**6**	%	ISO 527
Stress at break	**60**	MPa	ISO 527
Strain at break	**50**	%	ISO 527
Flexural modulus	**2250**	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	**70**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	**65**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 3mm	**70**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	**60**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**2020**	MPa	ASTM D 638
Tensile Strength at Yield	**55**	MPa	ASTM D 638
Tensile Strength at Break	**50**	MPa	ASTM D 638
Elongation at Yield	**6**	%	ASTM D 638
Elongation at Break	**98**	%	ASTM D 638
Flexural Modulus	**2230**	MPa	ASTM D 790
Rockwell Hardness	**R 121**	-	ASTM D 785
Izod Impact notched, 1/8 in	**865**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**774**	J/m	ASTM D 256
Temperature	**-30**	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Vicat softening temperature, B	**145**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**146**	°C	ISO 306
Burning behav. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested	**0.4**	mm	-
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	**960**	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (1)	**1**	mm	-
Glow Wire Ignition Temperature (GWIT)	**875**	°C	IEC 60695-2-13
GWIT - thickness tested (3)	**3**	mm	-
ASTM Data			
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			
Dielectric Strength, Short Time	**16.2**	kV/mm	ASTM D 149
Dissipation Factor, 1 MHz	**0.0093**	-	ASTM D 150
Dielectric Constant, 1 MHz	**2.64**	-	ASTM D 150
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	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Regional Availability
North America

Applications
Automotive