

LEXAN™ EXL6414 resin

Polycarbonate

SABIC Innovative Plastics

Message:

PC-Siloxane copolymer with excellent processability. Impact modified, medium flow, extreme low temp. ductility.

General Information			
UL YellowCard	E121562-220982		
Additive	Impact Modifier		
Features	Copolymer		
	Ductile		
	Good Processability		
	Impact Modified		
	Medium Flow		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.19	g/cm ³	ASTM D792
--	1.18	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	8.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	7.50	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1720	MPa	ASTM D638
--	2280	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	55.2	MPa	ASTM D638
Yield	54.0	MPa	ISO 527-2/50
Break ³	60.0	MPa	ASTM D638
Break	58.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁴	5.5	%	ASTM D638

Yield	6.0	%	ISO 527-2/50
Break ⁵	100	%	ASTM D638
Break	88	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span ⁶	2000	MPa	ASTM D790
-- ⁷	2090	MPa	ISO 178
Flexural Stress			
--	85.0	MPa	ISO 178
Yield, 50.0 mm Span ⁸	79.3	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	60	kJ/m ²	
23°C	70	kJ/m ²	
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	690	J/m	ASTM D256
23°C	800	J/m	ASTM D256
-30°C ¹¹	60	kJ/m ²	ISO 180/1A
23°C ¹²	70	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	3200	J/m	ASTM D4812
-30°C ¹³	No Break		ISO 180/1U
23°C ¹⁴	No Break		ISO 180/1U
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	61.0	J	
23°C, Total Energy	62.1	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	136	°C	ASTM D648
0.45 MPa, Unannealed, 100 mm Span ¹⁵	136	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 3.20 mm	122	°C	ASTM D648
1.8 MPa, Unannealed, 100 mm Span ¹⁶	122	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	141	°C	ASTM D1525, ISO 306/B50 ¹¹ ¹⁷
--	140	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	6.9E-5	cm/cm/°C	ISO 11359-2

Transverse : -40 to 40°C	7.2E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.3E-5	cm/cm/°C	ISO 11359-2
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	4.1E+17	ohms	IEC 60093
Volume Resistivity	1.7E+17	ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	18	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	2.69		IEC 60250
Dissipation Factor (1 MHz)	9.4E-3		IEC 60250
Arc Resistance ¹⁸	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	271 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Nozzle Temperature	288 to 310	°C	
Processing (Melt) Temp	293 to 316	°C	
Mold Temperature	71.1 to 93.3	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	50 mm/min		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	Type I, 50 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		

9.	80*10*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	80*10*3
15.	120*10*4 mm
16.	120*10*4 mm
17.	Rate B (120°C/h), Loading 2 (50 N)
18.	Tungsten Electrode

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

