LEXAN™ Homopolymer 940A

Polycarbonate

SABIC Innovative Plastics

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

LEXAN 940A Polycarbonate (PC) resin is a non-filled, injection moldable grade. This brominated flame retardant PC has a UL-94 V0 rating. LEXAN 940A is available in limited transparent and tinted color options and is a general purpose resin designed to meet the needs of various applications. As a non-chlorinated, non-brominated flame retardant solution, LEXAN 945A resin could be considered an alternative.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet		
UL Yellow Card [2]	• E121562-100175209 • E121562-100305095		
Search for UL Yellow Card	• SABIC Innovative Plastics		
Availability	• North America		
Additive	• Flame Retardant		
Features	• Flame Retardant	• Good Surface Finish	• Medium Viscosity
Uses	• Aerospace Applications • Appliances • Automotive Interior Parts • Construction Applications	• Electrical/Electronic Applications • Electronic Displays • Industrial Applications • Lenses	• Lighting Applications • Medical/Healthcare Applications • Non-specific Food Applications • Rail Applications
Appearance	• Clear/Transparent	• Colors Available	• Opaque
Processing Method	• Injection Molding		
Multi-Point Data	• Instrumented Impact (Energy) (ASTM D3763)	• Instrumented Impact (Load) (ASTM D3763)	• Shear DMA (ASTM D4065)
Also Available In	• Asia Pacific	• Europe	

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	• 1.21 • 1.22	g/cm³	ASTM D792
Specific Volume	0.830	cm³/g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			ASTM D570
24 hr	0.15	%	
Equilibrium, 23°C	0.35	%	
Equilibrium, 100°C	0.58	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength [4]			ASTM D638
Yield	62.0	MPa	
Break	55.0	MPa	
Tensile Elongation [4]			ASTM D638
Yield	7.0	%	
Break	90	%	
Flexural Modulus [5] (50.0 mm Span)	2240	MPa	ASTM D790
Flexural Strength [5] (Yield, 50.0 mm Span)	91.0	MPa	ASTM D790
Taber Abrasion Resistance			ASTM D1044
1000 Cycles, 1000 g, CS-17 Wheel	10.0	mg	

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	640	J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Gardner Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength [6]	525	kJ/m²	ASTM D1822

Form No. TDS-4583-en

Document Created: Tuesday, February 27, 2018
Added to Prospector: November 2000
Last Updated: 1/16/2018

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	137	°C	
1.8 MPa, Unannealed, 6.40 mm	132	°C	
Vicat Softening Temperature	151	°C	ASTM D1525 [7]
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.19	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.01		
50 kHz	3.01		
1 MHz	2.96		
Dissipation Factor			ASTM D150
50 Hz	9.0E-4		
60 Hz	9.0E-4		
1 MHz	0.010		
Arc Resistance [8]	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI) [9]	PLC 3		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			UL 94
1.5 mm	V-2		
3.0 mm	V-0		
Oxygen Index	35	%	ISO 4589-2
Radiant Panel Listing [10]	TRUE		
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.586		ASTM D542
Transmittance (2540 µm)	85.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	215 to 295	°C
Middle Temperature	280 to 305	°C
Front Temperature	295 to 315	°C
Nozzle Temperature	290 to 310	°C
Processing (Melt) Temp	295 to 315	°C
Mold Temperature	70 to 95	°C
Back Pressure	0.300 to 0.700	MPa
Screw Speed	40 to 70	rpm

Document Created: Tuesday, February 27, 2018
Added to Prospector: November 2000
Last Updated: 1/16/2018

Injection	Nominal Value	Unit
Vent Depth	0.025 to 0.076	mm

Injection Notes

Injection Molding Parameters

- Drying Time (Cumulative): 48 hrs

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] Type I, 50 mm/min

[5] 1.3 mm/min

[6] Type S

[7] Rate A (50°C/h), Loading 2 (50 N)

[8] Tungsten Electrode

[9] Surface

[10] UL Tested

Form No. TDS-4583-en

Document Created: Tuesday, February 27, 2018
Added to Prospector: November 2000
Last Updated: 1/16/2018

Where to Buy

Supplier

SABIC Innovative Plastics
Pittsfield, MA USA
Telephone: 800-845-0600
Web: http://www.sabic-ip.com/

Distributor

Nexeo Solutions
Telephone: 800-531-7106
Web: http://www.nexeosolutions.com/
Availability: North America

Form No. TDS-4583-en

Document Created: Tuesday, February 27, 2018
Added to Prospector: November 2000
Last Updated: 1/16/2018