

LEXAN™ Homopolymer 943A - Europe

Polycarbonate
SABIC

PROSPECTOR®

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Technical Data

Product Description

LEXAN 943A Polycarbonate (PC) resin is a non-filled, injection moldable grade. This brominated flame retardant PC has a UL-94 V0 rating and is UV stabilized, providing additional weathering capability. LEXAN 943A resin is available in limited transparent and tinted color options and is a general-purpose resin that is an excellent candidate for a wide variety of applications. As a non-chlorinated, non-brominated flame retardant solution, LEXAN 945U resin could be considered an alternative.

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet		
UL Yellow Card ²	• E45329-100506951		
Search for UL Yellow Card	• SABIC		
Availability	• Europe		
Additive	• Flame Retardant	• UV Stabilizer	
Features	• Flame Retardant	• Medium Viscosity	
Uses	• Aerospace Applications • Appliances • Automotive Applications • Automotive Exterior Parts • Automotive Interior Parts	• Construction Applications • Electrical/Electronic Applications • Electronic Displays • Household Goods • Lawn and Garden Equipment	• Lighting Applications • Outdoor Applications • Pharmaceuticals • Rail Applications
RoHS Compliance	• RoHS Compliant		
Appearance	• Clear/Transparent	• Colors Available	
Processing Method	• Injection Molding		
Also Available In	• Asia Pacific	• Latin America	• North America

Physical	Nominal Value Unit	Test Method
Density	1.20 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.00 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ⁴	0.50 to 0.70 %	Internal Method
Water Absorption		ISO 62
Saturation, 23°C	0.35 %	
Equilibrium, 23°C, 50% RH	0.15 %	
Mechanical	Nominal Value Unit	Test Method
Tensile Modulus	2350 MPa	ISO 527-2/1
Tensile Stress		ISO 527-2/50
Yield	63.0 MPa	
Break	65.0 MPa	
Tensile Strain		ISO 527-2/50
Yield	6.0 %	
Break	100 %	
Flexural Modulus ⁵	2300 MPa	ISO 178
Flexural Stress ^{5, 6}	90.0 MPa	ISO 178
Taber Abrasion Resistance		Internal Method
1000 Cycles, 1000 g, CS-17 Wheel	10.0 mg	



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Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		
-30°C ⁷	14 kJ/m ²	ISO 179/1eA
23°C ⁷	73 kJ/m ²	ISO 179/1eA
23°C	30 kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ⁷		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact Strength ⁸		ISO 180/1A
-30°C	12 kJ/m ²	
23°C	70 kJ/m ²	
Unnotched Izod Impact Strength ⁸		ISO 180/1U
-30°C	No Break	
23°C	No Break	
Hardness	Nominal Value Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0 MPa	ISO 2039-1
Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature ⁹		
0.45 MPa, Unannealed, 4.00 mm, 100 mm Span	136 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 4.00 mm, 100 mm Span	125 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	141 °C	ISO 306/B50
--	142 °C	ISO 306/B120
Ball Pressure Test		IEC 60695-10-2
123 to 127°C	Pass	
140°C ¹⁰	Pass	
CLTE - Flow (23 to 80°C)	7.0E-5 cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20 W/m/K	ISO 8302
RTI Elec	130 °C	UL 746
RTI Imp	120 °C	UL 746
RTI Str	130 °C	UL 746
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohms·cm	IEC 60093
Electric Strength (3.20 mm, in Oil)	17 kV/mm	IEC 60243-1
Relative Permittivity		IEC 60250
50 Hz	2.70	
60 Hz	2.70	
1 MHz	2.70	
Dissipation Factor		IEC 60250
50 Hz	1.0E-3	
60 Hz	1.0E-3	
1 MHz	0.010	
Comparative Tracking Index	225 V	IEC 60112
Needle Flame Test ¹¹ (1.50 mm)	Pass	IEC 60695-2-2
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.5 mm	V-2	
3.0 mm	V-0	
Glow Wire Flammability Index		IEC 60695-2-12
1.0 mm	850 °C	
1.6 mm	960 °C	
Oxygen Index	35 %	ISO 4589-2



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Optical	Nominal Value Unit	Test Method
Refractive Index	1.586	ISO 489
Transmittance (2540 µm)	88.0 %	ASTM D1003

Injection	Nominal Value Unit
Drying Temperature	120 °C
Drying Time	2.0 to 4.0 hr
Suggested Max Moisture	0.020 %
Hopper Temperature	60 to 80 °C
Rear Temperature	260 to 280 °C
Middle Temperature	270 to 290 °C
Front Temperature	280 to 300 °C
Nozzle Temperature	270 to 290 °C
Processing (Melt) Temp	280 to 300 °C
Mold Temperature	80 to 100 °C

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 Tensile Bar

⁵ 2.0 mm/min

⁶ at Yield

⁷ 80*10*3 sp=62mm

⁸ 80*10*3 mm

⁹ 120*10*4 mm

¹⁰ Approximate Maximum

¹¹ 10 sec



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Where to Buy

Supplier

SABIC

Web: <http://www.sabic.com/>

Distributor

Erteco Rubber & Plastics AB

Telephone: +46-8-587-517-00

Web: <http://www.erteco.se/>

Availability: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Sweden

POLY MIX

Telephone: +33-3-8920-1380

Web: <http://www.polymix.eu/>

Availability: France

RESINEX Group

RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.

Telephone: +32-14-672511

Web: <http://www.resinex.com/>

Availability: Europe

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Netherlands, South Africa

