

# LEXAN\* 945AU Resin

## Polycarbonate

### SABIC Innovative Plastics Europe



Prospector

#### Product Description

Lexan\* 945AU Polycarbonate (PC) resin is a non-filled, injection moldable grade. This non-chlorinated, non-brominated flame retardant PC has a V0 UL rating and is UV stabilized, providing additional weathering capability. Lexan 945AU is available in transparent and tinted color options and is a general-purpose resin that is an excellent candidate for a wide variety of applications.

#### General

Material Status	• Commercial: Active	
Availability	• Europe	
Additive	• Flame Retardant	• UV Stabilizer
Features	• Bromine Free	• Flame Retardant
	• Chlorine Free	• General Purpose
Uses	• General Purpose	
RoHS Compliance	• RoHS Compliant	
Appearance	• Clear/Transparent	• Colors Available
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Nominal Value Unit	Test Method
Density	1.20 g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	10.0 cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70 %	ASTM D955
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 <sup>2</sup>	2300 MPa	ISO 178
Flexural Strength <sup>2,3</sup>	90.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength <sup>4</sup>		ISO 179/1eA
-30°C	14 kJ/m <sup>2</sup>	
23°C	73 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength <sup>4</sup>		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact Strength <sup>5</sup>		ISO 180/1A
-30°C	12.0 kJ/m <sup>2</sup>	
23°C	70.0 kJ/m <sup>2</sup>	
Unnotched Izod Impact Strength <sup>5</sup>		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 <sup>6</sup>		
0.45 MPa, Unannealed, 100 mm Span	136 °C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	125 °C	ISO 75-2/Ae
Vicat Softening Temperature		
--	141 °C	ISO 306/B50

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Thermal	Nominal Value Unit	Test Method
--	142 °C	ISO 306/B120
Ball Pressure Test (125°C)	Pass	IEC 60695-10-2
CLTE		ISO 11359-2
Flow: 23 to 80°C	0.000070 cm/cm/°C	
Transverse: 23 to 80°C	0.000070 cm/cm/°C	
Thermal Conductivity	0.20 W/m/K	ISO 8302
Electrical	Nominal Value Unit	Test Method
Surface Resistivity	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohm·cm	IEC 60093
Relative Permittivity		IEC 60250
50 Hz	2.70	
60 Hz	2.70	
1 MHz	2.70	
Dissipation Factor		IEC 60250
50 Hz	0.0010	
60 Hz	0.0010	
1 MHz	0.010	
Comparative Tracking Index	225 V	IEC 60112
Electric Strength (3.20 mm, in Oil)	17 kV/mm	IEC 60243-1
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL		UL 94
1.50 mm	V-2	
3.00 mm	V-0	
Glow Wire Flammability Index (1.00 mm)	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	850 °C	IEC 60695-2-13
Oxygen Index	35 %	ISO 4589-2
UL 746	Nominal Value Unit	Test Method
RTI Str	125 °C	UL 746
RTI Imp	120 °C	UL 746
RTI Elec	130 °C	UL 746
Outdoor Suitability	f1	UL 746C
Injection	Nominal Value Unit	
Drying Temperature	120 °C	
Drying Time	2.0 to 4.0 hr	
Suggested Max Moisture	0.020 %	
Hopper Temperature	60.0 to 80.0 °C	
Rear Temperature	260 to 280 °C	
Middle Temperature	270 to 290 °C	
Front Temperature	280 to 310 °C	
Nozzle Temperature	270 to 290 °C	
Processing (Melt) Temp	280 to 310 °C	
Mold Temperature	80.0 to 110 °C	

**Notes**

- <sup>1</sup> Typical properties: these are not to be construed as specifications.
- <sup>2</sup> 2.0 mm/min
- <sup>3</sup> Yield
- <sup>4</sup> 80\*10\*3 sp=62mm
- <sup>5</sup> 80\*10\*3
- <sup>6</sup> 120\*10\*4 mm