

LEXAN* 945U Resin

Polycarbonate

SABIC Innovative Plastics Europe



Prospector

Product Description

Lexan* 945U Polycarbonate (PC) resin is a non-filled, injection moldable grade. This non-chlorinated, non-brominated flame retardant PC has an UL-94 V0 rating and is UV stabilized, providing additional weathering capability. Lexan 945U is available in various opaque color options and is a general-purpose resin ideal 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	• Colors Available	• Opaque
Processing Method	• Injection Molding	

Physical	Nominal Value Unit	Test Method
Density	1.20 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	10.0 cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ²	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	60.0 MPa	
Tensile Strain		ISO 527-2/50
Yield	6.0 %	
Break	85 %	
Flexural Modulus ³	2300 MPa	ISO 178
Flexural Strength ^{3,4}	90.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength ⁵		ISO 179/1eA
-30°C	14 kJ/m ²	
23°C	73 kJ/m ²	
Charpy Unnotched Impact Strength ⁵		ISO 179/1eU
-30°C	No Break	
23°C	No Break	
Notched Izod Impact Strength ⁶		ISO 180/1A
-30°C	12 kJ/m ²	
23°C	70 kJ/m ²	
Unnotched Izod Impact Strength ⁶		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

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Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature ⁷		
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
--	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 (1.50 mm)	V-0	UL 94
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	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	

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Notes

¹ Typical properties: these are not to be construed as specifications.

² Tensile Bar

³ 2.0 mm/min

⁴ Yield

⁵ 80*10*3 sp=62mm

⁶ 80*10*3

⁷ 120*10*4 mm

Revision History

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