

LEXAN™ 945AU resin

Polycarbonate

SABIC Innovative Plastics Europe

Message:

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 Information			
UL YellowCard	E45329-236665	E45329-499086	
Additive	Flame Retardant		
	UV Stabilizer		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	General Purpose		
	Good UV Resistance		
Uses	General Purpose		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
	Colors Available		
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 ¹	0.50 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	95.0	MPa	ISO 2039-1
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 ²	2300	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	14	kJ/m ²	
23°C	73	kJ/m ²	
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength ⁵			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		
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	7.0E-5	cm/cm/°C	
Transverse : 23 to 80°C	7.0E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	125	°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
Flammability	Nominal Value	Unit	Test Method
Flame Rating			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
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	60.0 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	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*3 sp=62mm		
4.	80*10*3 sp=62mm		
5.	80*10*3		
6.	80*10*3		
7.	120*10*4 mm		

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