

LEXAN™ 945U resin

Polycarbonate

SABIC Innovative Plastics

Message:

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 resin 945U is available in various opaque color options and is a general-purpose resin ideal for a wide variety of applications.

General Information			
UL YellowCard	E121562-100305095	E121562-565243	E121562-220903
Additive	Flame Retardant		
	UV Stabilizer		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	General Purpose		
Uses	General Purpose		
Appearance	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.80	%	Internal Method
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2270	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	62.0	MPa	
Break	65.0	MPa	
Tensile Elongation ³			ASTM D638
Yield	6.0	%	
Break	130	%	
Flexural Modulus ⁴ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 50.0 mm Span)	101	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	800	J/m	ASTM D256

Instrumented Dart Impact (23°C, Total Energy)	73.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	137	°C	
1.8 MPa, Unannealed, 3.20 mm	126	°C	
Vicat Softening Temperature	143	°C	ASTM D1525 ⁶
CLTE			ASTM E831
Flow : -40 to 40°C	6.7E-5	cm/cm/°C	
Transverse : -40 to 40°C	6.7E-5	cm/cm/°C	
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Arc Resistance ⁷	PLC 7		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 2		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
0.800 mm	V-2		
1.52 mm	V-0		
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.50 mm)	800	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	271 to 293	°C	
Middle Temperature	282 to 304	°C	
Front Temperature	293 to 316	°C	
Nozzle Temperature	288 to 310	°C	
Processing (Melt) Temp	293 to 316	°C	
Mold Temperature	71.1 to 93.3	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	50 mm/min		

2.	Type I, 50 mm/min
3.	Type I, 50 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	Rate B (120°C/h), Loading 2 (50 N)
7.	Tungsten Electrode

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