

LEXAN™ 945A resin

Polycarbonate
SABIC Innovative Plastics

Message:

LEXAN 945A 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 available in transparent and tinted color options. LEXAN 945A is a general purpose resin designed to meet the needs of various applications.

General Information		
UL YellowCard	E121562-100305095	E121562-587071
Additive	Flame Retardant	
Features	Bromine Free	
	Chlorine Free	
	Flame Retardant	
	General Purpose	
Uses	General Purpose	
Appearance	Clear/Transparent	
	Colors Available	
Processing Method	Injection Molding	
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)	
	Flexural DMA (ASTM D4065)	
	Pressure-Volume-Temperature (PVT - Zoller Method)	
	Shear DMA (ASTM D4065)	
	Specific Heat vs. Temperature (ASTM D3417)	
	Tensile Creep (ASTM D2990)	
	Tensile Fatigue	
	Tensile Stress vs. Strain (ASTM D638)	
	Thermal Conductivity vs. Temperature (ASTM E1530)	
	Viscosity vs. Shear Rate (ASTM D3835)	

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
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	2270	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	62.0	MPa	
Break	67.0	MPa	

Tensile Elongation ³			ASTM D638
Yield	6.0	%	
Break	130	%	
Flexural Modulus ⁴ (50.0 mm Span)	2370	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)	79.0	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	6.8E-5	cm/cm/°C	
Transverse : -40 to 40°C	7.4E-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 2		UL 746
High Amp Arc Ignition (HAI)	PLC 3		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		
3.04 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
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.	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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