

LEXAN™ 943A resin

Polycarbonate
SABIC Innovative Plastics

Message:
Medium viscosity, superior flame retardance. UV-Stabilized. Clear, tints and opaque colors.

General Information			
UL YellowCard	E121562-100327450		
Additive	Flame Retardant		
	UV Stabilizer		
Features	Flame Retardant		
	Good Surface Finish		
	Medium Viscosity		
Appearance	Clear/Transparent		
	Colors Available		
	Opaque		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.21	g/cm ³	
--	1.22	g/cm ³	
Specific Volume	0.835	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.70	%	Internal Method
Water Absorption			ASTM D570
24 hr	0.15	%	
Equilibrium, 23°C	0.35	%	
Equilibrium, 100°C	0.58	%	
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.1	MPa	
Break	55.8	MPa	

Tensile Elongation ²			ASTM D638
Yield	7.0	%	
Break	90	%	
Flexural Modulus ³ (50.0 mm Span)	2240	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	91.0	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	640	J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200	J/m	ASTM D4812
Gardner Impact (23°C)	169	J	ASTM D3029
Tensile Impact Strength ⁵	525	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	138	°C	
1.8 MPa, Unannealed, 6.40 mm	132	°C	
Vicat Softening Temperature	152	°C	ASTM D1525 ⁶
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Thermal Conductivity	0.19	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	120	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.01		
60 Hz	3.01		
1 MHz	2.96		
Dissipation Factor			ASTM D150
50 Hz	9.0E-4		
60 Hz	9.0E-4		
1 MHz	0.010		
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
1.47 mm	V-2		
3.00 mm	V-0		

Oxygen Index	35	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 μm)	85.0	%	ASTM D1003
Haze (2540 μm)	1.0	%	ASTM D1003
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.	Type I, 50 mm/min		
2.	Type I, 50 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	Type S		
6.	Rate B (120°C/h), Loading 2 (50 N)		
7.	Tungsten Electrode		

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