LEXAN™ 943X resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN 943X is a UV stabilized medium flow impact modified injection molding (IM) grade. This resin offers UL94 V0 @ 1.5mm flame retardancy based on non-bromine, non-chlorine FR systems, low temperature ductility characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC. LEXAN 943X resin is a product available in a wide range of opaque colors and may be an excellent candidate for a wide range of applications.

General Information			
Additive	Impact Modifier UV Stabilizer		
Features	Bromine Free Chlorine Free Ductile Fast Molding Cycle Flame Retardant Good Processability Impact Modified Medium Flow		
Uses	General Purpose		
Appearance	Colors Available Opaque		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.18	g/cm³	ASTM D792
--	1.19	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.00	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.40 to 0.80	%	
Across Flow : 3.20 mm	0.40 to 0.80	%	
Water Absorption			ISO 62
Saturation, 23°C	0.35	%	
Equilibrium, 23°C, 50% RH	0.15	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus			
-- [1]	2100	MPa	ASTM D638
--	2100	MPa	ISO 527-2/1
Tensile Strength			
Yield [2]	58.0	MPa	ASTM D638
Yield	55.0	MPa	ISO 527-2/50
Break [3]	60.0	MPa	ASTM D638
Break	60.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break [5]	130	%	ASTM D638
Break	130	%	ISO 527-2/50
Flexural Modulus			
50.0 mm Span [6]	2060	MPa	ASTM D790
-- [7]	2200	MPa	ISO 178
Flexural Stress			
--	85.0	MPa	ISO 178
Yield, 50.0 mm Span [8]	89.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-30°C	60	kJ/m²	
23°C	75	kJ/m²	
Charpy Unnotched Impact Strength [10]			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			
-30°C	650	J/m	ASTM D256
23°C	800	J/m	ASTM D256
-30°C [11]	50	kJ/m²	ISO 180/1A
23°C [12]	70	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength [13]			ISO 180/1U
-30°C	No Break		
23°C	No Break		
Instrumented Dart Impact (23°C, Total Energy)	50.0	J	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	135	°C	
1.8 MPa, Unannealed, 3.20 mm	120	°C	
Vicat Softening Temperature	140	°C	ISO 306/B120, ASTM D1525 [14]
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2

CLTE			
Flow : -40 to 40°C	6.5E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	7.2E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	6.5E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	7.7E-5	cm/cm/°C	ISO 11359-2
RTI Elec	125	°C	UL 746
RTI Imp	115	°C	UL 746
RTI Str	120	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength			
3.20 mm, in Oil	17	kV/mm	ASTM D149
3.20 mm, in Oil	16	kV/mm	IEC 60243-1
Dielectric Constant			ASTM D150
50 Hz	2.95		
60 Hz	2.95		
1 MHz	2.90		
Dissipation Factor			ASTM D150
50 Hz	2.4E-3		
60 Hz	2.4E-3		
1 MHz	8.5E-3		
Comparative Tracking Index (CTI)	PLC 3		UL 746
Comparative Tracking Index	225	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 1		UL 746
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
1.50 mm	V-0		
3.00 mm	5VA		
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	825	°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	217 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	71.0 to 93.0	°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.	Type I, 50 mm/min
5.	Type I, 50 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*3 sp=62mm
10.	80*10*3 sp=62mm
11.	80*10*3
12.	80*10*3
13.	80*10*3
14.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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