

LEXAN™ 923 resin

Polycarbonate

SABIC Innovative Plastics

Message:

Opaque colors, low viscosity, superior flame retardance. Decreased smoke and lowered toxic gas emission. UV-stabilized.

General Information			
UL YellowCard	E207780-100726486		
Additive	UV stabilizer		
Features	Low smoke		
	Low viscosity		
	Low toxicity		
	Flame retardancy		
Appearance	Opacity		
	Available colors		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.21	g/cm ³	ASTM D792
--	1.22	g/cm ³	ASTM D792
Specific Volume	0.835	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.70	%	Internal method
Water Absorption			ASTM D570
24 hr	0.15	%	ASTM D570
Equilibrium, 23°C	0.35	%	ASTM D570
Equilibrium, 100°C	0.58	%	ASTM D570
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	70		ASTM D785
Class r	118		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	62.1	MPa	ASTM D638
Fracture	55.8	MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield	7.0	%	ASTM D638

Fracture	90	%	ASTM D638
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
Dart Drop 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, 6.40mm	138	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	132	°C	ASTM D648
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	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		ASTM D150
60 Hz	3.01		ASTM D150
1 MHz	2.96		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	9.0E-4		ASTM D150
60 Hz	9.0E-4		ASTM D150
1 MHz	0.010		ASTM D150
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 1		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	V-0		UL 94
Oxygen Index	35	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	

Drying Time, Maximum	48	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 - 60	%
Rear Temperature	266 - 288	°C
Middle Temperature	277 - 299	°C
Front Temperature	288 - 310	°C
Nozzle Temperature	282 - 304	°C
Processing (Melt) Temp	288 - 310	°C
Mold Temperature	71.1 - 93.3	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE

- | | |
|----|---------------------------|
| 1. | Type 1, 50mm/min |
| 2. | Type 1, 50mm/min |
| 3. | 1.3 mm/min |
| 4. | 1.3 mm/min |
| 5. | Type S |
| 6. | 标准 B (120°C/h), 载荷2 (50N) |
| 7. | Tungsten electrode |

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