

LEXAN™ 103R resin

Polycarbonate

SABIC Innovative Plastics

Message:

Nonhalogenated. 7.0 MFR, for thicker sections without sinks. UV Stabilized for outdoor and lighting. Internal mold release.

General Information			
UL YellowCard	E45587-236864		
Additive	demoulding		
	UV stabilizer		
Features	Halogen-free		
Uses	Outdoor application		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.20	g/cm ³	ASTM D792
--	1.19	g/cm ³	ASTM D792
Specific Volume	0.835	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.0	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	65.5	MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield	7.0	%	ASTM D638
Fracture	110	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	93.1	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)	910	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	546	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	154	°C	ASTM D1525 ⁶
CLTE - Flow (-40 to 95°C)	6.8E-5	cm/cm/°C	ASTM E831
Specific Heat	1260	J/kg/°C	ASTM C351
Thermal Conductivity	0.19	W/m/K	ASTM C177
RTI Elec	130	°C	UL 746
RTI Imp	130	°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)	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.17		ASTM D150
60 Hz	3.17		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
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 1		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 4		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.762 mm)	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003
Injection	Nominal Value	Unit	Test Method
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	288 - 310	°C
Middle Temperature	299 - 321	°C
Front Temperature	310 - 332	°C
Nozzle Temperature	304 - 327	°C
Processing (Melt) Temp	310 - 332	°C
Mold Temperature	82.2 - 116	°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) |

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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