

LEXAN™ 920 resin

Polycarbonate
SABIC Innovative Plastics

Message:
Opaque colors, low viscosity, superior flame retardance.

General Information	
UL YellowCard	E121562-220892
Features	Flame Retardant
	Low Viscosity
Appearance	Opaque
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	Flexural DMA (ASTM D4065)
	Instrumented Impact (Energy) (ASTM D3763)
	Instrumented Impact (Load) (ASTM D3763)
	Pressure-Volume-Temperature (PVT - Zoller Method)
	Shear DMA (ASTM D4065)
	Specific Heat vs. Temperature (ASTM D3417)
	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			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)	15	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 2		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746

Hot-wire Ignition (HWI)	PLC 2		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 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	266 to 288	°C	
Middle Temperature	277 to 299	°C	
Front Temperature	288 to 310	°C	
Nozzle Temperature	282 to 304	°C	
Processing (Melt) Temp	288 to 310	°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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