

Resin Pricing Report + Survey

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Monday, July 25, 2005

LEXAN* 124R Resin
 GE Advanced Materials - Polycarbonate

Unit System: English

View**Datasheet** **Shown Below**ASTM Data Sheet 

ISO Data Sheet --

CAMPUS® Data Sheet --

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Nonhalogenated. 17.5 MFR, for small, intricate parts. FDA compliant UL rated HB as of 10/97. 200 series recommended when V-2 rating required.

General

Material Status	● Commercial: Active
Availability	● North America
Test Standards Available	● ASTM
Features	● Halogen Content, Low to None
Agency Ratings	● FDA Unspecified Rating
Forms	● Pellets
Processing Method	● Injection Molding
Multi-Point Data	● Viscosity vs. Shear Rate (ASTM D3835)

ASTM and ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density - Specific Gravity	1.20	sp gr 23/23°C	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	17.5	g/10 min	ASTM D1238
Mold Shrink, Linear-Flow (0.126 in)	0.0050 to 0.0070	in/in	ASTM D955
Water Absorption @ 24 hrs	0.15	%	ASTM D570
Water Absorption @ Equil			ASTM D570
(73 °F)	0.35	%	
(212 °F)	0.58	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength @ Yield ²	9000	psi	ASTM D638
Tensile Strength @ Break ²	10000	psi	ASTM D638
Tensile Elongation @ Yld ²	7.0	%	ASTM D638
Tensile Elongation @ Brk ²	130	%	ASTM D638
Flexural Modulus (1.97 in Span) ³	340000	psi	ASTM D790
Flexural Strength @ Yield (1.97 in Span) ³	14000	psi	ASTM D790
Taber Abrasion Resistance (1000 Cycles) ⁴	10.0	mg	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73 °F)	13.0	ft-lb/in	ASTM D256
Unnotched Izod Impact (73 °F)	60.0	ft-lb/in	ASTM D256
Gardner Impact (73 °F)	1500	in-lb	ASTM D3029
Tensile Impact Strength ⁵	260	ft-lb/in ²	ASTM D1822
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785

(M-Scale)	70		
(R-Scale)	118		
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Unannealed (0.252 in)	280	°F	ASTM D648
DTUL @264psi - Unannealed (0.252 in)	265	°F	ASTM D648
Vicat Softening Point (Rate B, Loading 2 (50 N))	310	°F	ASTM D1525
CLTE, Flow (TMA) (-40 to 203°F (-40 to 95°C))	0.000038	in/in/°F	ASTM E831
Specific Heat	0.300	Btu/lb/°F	ASTM C351
Thermal Conductivity	1.3	Btu-in/hr/ft ² /°F	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+17	ohm-cm	ASTM D257
Dielectric Strength (0.126 in, in Air)	380	V/mil	ASTM D149
Dielectric Constant			ASTM D150
(50 Hz)	3.170		
(60 Hz)	3.170		
(1E+6 Hz)	2.960		
Dissipation Factor			ASTM D150
(50 Hz)	0.00090		
(60 Hz)	0.00090		
(1E+6 Hz)	0.0100		
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL (0.0580 in)	HB		UL 94
UL 746	Nominal Value	Unit	Test Method
Rel Temp Indx Mech w/olmp	266	°F	UL 746
Rel Temp Indx Mech w/lmp	266	°F	UL 746
Rel Temp Indx Elect	266	°F	UL 746
Comparative Tracking Index (CTI) (PLC)	PLC 2		UL 746
High Voltage Arc Tracking Rate (HVTR) (PLC)	PLC 2		UL 746
Hot-wire Ignition (HWI) (PLC)	PLC 2		UL 746
High Amp Arc Ignition (HAI) (PLC)	PLC 1		UL 746
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance	88.0	%	ASTM D1003
Haze	1.0	%	ASTM D1003
Additional Properties	The value listed as Unnotched Izod Impact, ASTM D256, was tested in accordance with ASTM D4812.		
	Specific Volume, ASTM D792: .83454063 cm ³ /g		

Processing Information

	Nominal Value	Unit
Injection		
Drying Temperature	250	°F
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	500 to 540	°F
Middle Temperature	520 to 560	°F
Front Temperature	540 to 580	°F
Nozzle Temperature	530 to 570	°F
Processing (Melt) Temp	540 to 580	°F
Mold Temperature	160 to 200	°F
Back Pressure	50.0 to 100.0	psi
Screw Speed	40 to 70	rpm
Vent Depth	0.0010 to 0.0030	in

Notes

- 1 Typical properties: these are not to be construed as specifications.
- 2 Type I, 2 in/min
- 3 0.05 in/min
- 4 1000 gm, CS-17 Wheel

5 Type S

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