

LEXAN™ 4501 resin

Polyphthalate Carbonate

SABIC Innovative Plastics

Message:

High heat resistant polyphthlate carbonate, provides DTUL of 290F at 264 psi.

General Information			
UL YellowCard	E121562-220884		
Features	High Heat Resistance		
Processing Method	Injection Molding		
Multi-Point Data	Pressure-Volume-Temperature (PVT - Zoller Method)		
	Shear DMA (ASTM D4065)		

Physical	Nominal Value	Unit	Test Method
Specific Gravity			ASTM D792
--	1.20	g/cm ³	
--	1.19	g/cm ³	
Specific Volume	0.835	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	3.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.70 to 0.80	%	Internal Method
Water Absorption (24 hr)	0.16	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
R-Scale	122		

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	65.5	MPa	
Break	71.7	MPa	
Tensile Elongation ² (Break)	120	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2030	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	95.1	MPa	ASTM D790

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)	149	J	ASTM D3029
Tensile Impact Strength ⁵	578	kJ/m ²	ASTM D1822

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.20 mm)	143	°C	ASTM D648

CLTE - Flow (-40 to 95°C)	9.2E-5	cm/cm/°C	ASTM E831
Specific Heat	1260	J/kg/°C	ASTM C351
Thermal Conductivity	0.21	W/m/K	ASTM C177
RTI Elec	125	°C	UL 746
RTI Imp	125	°C	UL 746
RTI Str	125	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 2.6E+16	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.15		
60 Hz	3.15		
1 MHz	3.00		
Dissipation Factor			ASTM D150
50 Hz	1.2E-3		
60 Hz	1.2E-3		
100 Hz	0.024		
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 4		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.47 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.600		ASTM D542
Transmittance (2540 µm)	85.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003
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	316 to 338	°C	
Middle Temperature	327 to 349	°C	
Front Temperature	338 to 360	°C	
Nozzle Temperature	332 to 354	°C	
Processing (Melt) Temp	338 to 360	°C	
Mold Temperature	82.2 to 116	°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

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