

LEXAN™ 4501 resin

Polyphthalate Carbonate

SABIC Innovative Plastics

Message:

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

General Information			
Features	Heat resistance, high		
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)	3.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.70 - 0.80	%	Internal method
Water Absorption (24 hr)	0.16	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	85		ASTM D785
Class r	122		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	65.5	MPa	ASTM D638
Fracture	71.7	MPa	ASTM D638
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
Dart Drop 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	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		ASTM D150
60 Hz	3.15		ASTM D150
1 MHz	3.00		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	1.2E-3		ASTM D150
60 Hz	1.2E-3		ASTM D150
100 Hz	0.024		ASTM D150
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 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	316 - 338	°C	
Middle Temperature	327 - 349	°C	
Front Temperature	338 - 360	°C	
Nozzle Temperature	332 - 354	°C	
Processing (Melt) Temp	338 - 360	°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

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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

