

LEXAN™ 4701R resin

Polyphthalate Carbonate
SABIC Innovative Plastics

Message:
High heat resistant polyphthlate carbonate, provides DTUL of 300F at 264 psi.

General Information	
Features	High Heat Resistance
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)
	Shear DMA (ASTM D4065)
	Specific Heat vs. Temperature (ASTM D3417)
	Tensile Fatigue
	Tensile Stress vs. Strain (ASTM D638)
	Thermal Conductivity vs. Temperature (ASTM E1530)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Specific Volume	0.830	cm ³ /g	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
300°C/1.2 kg	2.0	g/10 min	
300°C/6.1 kg	9.0	g/10 min	
Molding Shrinkage - Flow (3.20 mm)	0.80 to 1.0	%	Internal Method
Water Absorption (24 hr)	0.19	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	92		
R-Scale	127		
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹			ASTM D638
Yield	65.5	MPa	
Break	77.9	MPa	
Tensile Elongation ² (Break)	78	%	ASTM D638
Flexural Modulus ³ (50.0 mm Span)	2330	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	97.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	370	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)	149	°C	ASTM D648
CLTE - Flow (-40 to 95°C)	8.1E-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	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 2.5E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Air)	20	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.27		
60 Hz	3.27		
1 MHz	3.10		
Dissipation Factor			ASTM D150
50 Hz	1.6E-3		
60 Hz	1.6E-3		
100 Hz	0.026		
Arc Resistance ⁶	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 3		UL 746
High Amp Arc Ignition (HAI)	PLC 3		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
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	Test Method
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	327 to 349	°C	
Middle Temperature	338 to 360	°C	
Front Temperature	349 to 371	°C	
Nozzle Temperature	343 to 366	°C	

Processing (Melt) Temp	349 to 371	°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 |
| 6. | Tungsten Electrode |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

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

