

Lexan* Resin 4501

Americas: COMMERCIAL

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

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	71	MPa	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	122	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	95	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2020	MPa	ASTM D 790
Hardness, Rockwell M	85	-	ASTM D 785
Hardness, Rockwell R	122	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	3204	J/m	ASTM D 4812
Izod Impact, notched, 23°C	640	J/m	ASTM D 256
Tensile Impact, Type "S"	577	kJ/m ²	ASTM D 1822
Falling Dart Impact (D 3029), 23°C	149	J	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	143	°C	ASTM D 648
CTE, -40°C to 95°C, flow	9.18E-05	1/°C	ASTM E 831
Specific Heat	1.25	J/g-°C	ASTM C 351
Thermal Conductivity	0.21	W/m-°C	ASTM C 177
Relative Temp Index, Elec	125	°C	UL 746B
Relative Temp Index, Mech w/impact	125	°C	UL 746B
Relative Temp Index, Mech w/o impact	125	°C	UL 746B
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.83	cm ³ /g	ASTM D 792
Density	1.19	g/cm ³	ASTM D 792
Water Absorption, 24 hours	0.16	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.7 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	3	g/10 min	ASTM D 1238
OPTICAL			
Light Transmission	85	%	ASTM D 1003
Haze	1	%	ASTM D 1003
Refractive Index	1.6	-	ASTM D 542
ELECTRICAL			
Volume Resistivity	>2.6E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	20.2	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.15	-	ASTM D 150
Relative Permittivity, 1 MHz	3	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0012	-	ASTM D 150
Dissipation Factor, 100 Hz	0.024	-	ASTM D 150
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A

High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-2 Flame Class Rating (3)	1.47	mm	UL 94

Source GMD, last updated:01/04/2000

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	340 - 360	°C
Nozzle Temperature	330 - 355	°C
Front - Zone 3 Temperature	340 - 360	°C
Middle - Zone 2 Temperature	325 - 350	°C
Rear - Zone 1 Temperature	315 - 340	°C
Mold Temperature	80 - 115	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

Source GMD, last updated:01/04/2000

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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