



LEXAN™ Resin 4701R
Americas: COMMERCIAL

High heat resistant polypthlate carbonate, provides DTUL of 300F at 264 psi.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	660	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	790	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	78	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	990	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23700	kgf/cm ²	ASTM D 790
Hardness, Rockwell M	92	-	ASTM D 785
Hardness, Rockwell R	127	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	38	cm-kgf/cm	ASTM D 256
Tensile Impact, Type S	589	cm-kgf/cm ²	ASTM D 1822
Falling Dart Impact (D 3029), 23°C	1520	cm-kgf	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	148	°C	ASTM D 648
CTE, -40°C to 95°C, flow	8.1E-05	1/°C	ASTM E 831
Specific Heat	1.26	J/g-°C	ASTM C 351
Thermal Conductivity	0.21	W/m-°C	ASTM C 177
Relative Temp Index, Elec	130	°C	UL 746B
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°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



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PHYSICAL			
Water Absorption, 24 hours	0.19	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.8 - 1	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	2	g/10 min	ASTM D 1238
Melt Flow Rate, 300°C/6.1 kgf	9	g/10 min	ASTM D 1238
OPTICAL			
Light Transmission, 2.54 mm	85	%	ASTM D 1003
Haze, 2.54 mm	1	%	ASTM D 1003
Refractive Index	1.6	-	ASTM D 542
ELECTRICAL			
Volume Resistivity	>2.5E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	20	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.27	-	ASTM D 150
Relative Permittivity, 1 MHz	3.1	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0016	-	ASTM D 150
Dissipation Factor, 100 Hz	0.026	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
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}	3	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A



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PROCESSING PARAMETERS	TYPICAL 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	350 - 370	°C
Nozzle Temperature	345 - 365	°C
Front - Zone 3 Temperature	350 - 370	°C
Middle - Zone 2 Temperature	340 - 360	°C
Rear - Zone 1 Temperature	325 - 350	°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