

## Lexan\* Resin 201R

### Americas: COMMERCIAL

7.0 MFR, for thicker sections without sinks. Improved flame retardance. Internal mold release.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	630	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	700	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	135	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	990	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23900	kgf/cm <sup>2</sup>	ASTM D 790
Hardness, Rockwell M	70	-	ASTM D 785
Hardness, Rockwell R	118	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D 1044
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	92	cm-kgf/cm	ASTM D 256
Tensile Impact, Type S	642	cm-kgf/cm <sup>2</sup>	ASTM D 1822
Falling Dart Impact (D 3029), 23°C	1728	cm-kgf	ASTM D 3029
Instrumented Impact Energy @ peak, 23°C	662	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	154	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	137	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	132	°C	ASTM D 648
CTE, -40°C to 95°C, flow	6.84E-05	1/°C	ASTM E 831
Specific Heat	1.25	J/g-°C	ASTM C 351
Thermal Conductivity	0.29	W/m-°C	ASTM C 177
Relative Temp Index, Elec	130	°C	UL 746B

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.  
All properties, except the melt volume rate are measured on injection moulded samples.  
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.  
3) This rating is not intended to reflect hazards presented this or any other material under actual fire conditions.  
4) Own measurement according to UL.

Source, GMD, Last Update:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>THERMAL</b>			
Relative Temp Index, Mech w/impact	130	°C	UL 746B
Relative Temp Index, Mech w/o impact	130	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.83	cm³/g	ASTM D 792
Density	1.19	g/cm³	ASTM D 792
Water Absorption, 24 hours	0.15	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.35	%	ASTM D 570
Water Absorption, equilibrium, 100°C	0.58	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	7	g/10 min	ASTM D 1238
<b>OPTICAL</b>			
Light Transmission, 2.54 mm	88	%	ASTM D 1003
Haze, 2.54 mm	1	%	ASTM D 1003
Refractive Index	1.586	-	ASTM D 542
<b>ELECTRICAL</b>			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	14.9	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3.17	-	ASTM D 150
Relative Permittivity, 1 MHz	2.96	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.0009	-	ASTM D 150
Dissipation Factor, 1 MHz	0.01	-	ASTM D 150
Hot Wire Ignition (PLC)	2	PLC Code	UL 746A
High Voltage Arc Track Rate (PLC)	2	PLC Code	UL 746A
High Ampere Arc Ign, surface (PLC)	1	PLC Code	UL 746A
Comparative Tracking Index (UL) (PLC)	2	PLC Code	UL 746A

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-2 Flame Class Rating (3)	1.09	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	5.99	mm	UL 94
UV-light, water exposure/immersion	F2	-	UL 746C

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
<b>Injection Molding</b>		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	310 - 330	°C
Nozzle Temperature	305 - 325	°C
Front - Zone 3 Temperature	310 - 330	°C
Middle - Zone 2 Temperature	300 - 320	°C
Rear - Zone 1 Temperature	290 - 310	°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

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