Lexan* Resin 141R

Americas: COMMERCIAL

UL rated HB as of 10/97. 200 series recommended when V-2 rating required. Nonhalogenated. 10.5 MFR. Internal mold release.

You may also be interested in:		
Enhanced Property	**Data Sheet**	
Improved UV	SLX1432T	Additonal Information
Improved UV	SLX1431T	Additonal Information
Improved Ductility	EXL1414	Additonal Information
Improved Ductility	EXL1413T	Additonal Information
Improved Scratch Resistance	DMX2415	Additonal Information
Improved HDT	XHT4141	Additonal Information
Improved HDT	4301	
Medical Grade	HP4	Additonal Information

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	630	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	700	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	130	%	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	980	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23900	kgf/cm²	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
IMPACT			
Izod Impact, unnotched, 23°C	326	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	81	cm-kgf/cm	ASTM D 256
Tensile Impact, Type "S"	589	cm-kgf/cm²	ASTM D 1822
Falling Dart Impact (D 3029), 23°C	1728	cm-kgf	ASTM D 3029

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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:10/31/2000

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
IMPACT			
Instrumented Impact Total Energy, 23°C	650	cm-kgf	ASTM D 3763
THERMAL			
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	0.27	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	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	10.5	g/10 min	ASTM D 1238
OPTICAL			
Light Transmission	88	%	ASTM D 1003
Haze	1	%	ASTM D 1003
Refractive Index	1.586	-	ASTM D 542
ELECTRICAL			
Volume Resistivity	>1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 3.2 mm	14.9	kV/mm	ASTM D 149

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
ELECTRICAL			
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
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.71	mm	UL 94
Radiant Panel Listing	YES	-	UL Tested
UV-light, water exposure/immersion	F2	-	UL 746C

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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	295 - 315	°C
Nozzle Temperature	290 - 310	°C
Front - Zone 3 Temperature	295 - 315	°C
Middle - Zone 2 Temperature	280 - 305	°C
Rear - Zone 1 Temperature	270 - 295	°C
Mold Temperature	70 - 95	°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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