



Lexan* Resin 104R

Europe-Africa-Middle East: COMMERCIAL

LEXAN 104R is a high viscosity multi purpose grade. FDA food contact compliant in limited colors.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	GE Method
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	70	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Hardness, H358/30	95	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	65	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	10	kJ/m ²	ISO 180/1A
Charpy Impact, notched, 23°C	35	kJ/m ²	ISO 179/2C
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m ²	ISO 179/1eU
THERMAL			
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	140	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	144	°C	ISO 306
Vicat Softening Temp, Rate B/120	145	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	138	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	127	°C	ISO 75/Ae
Relative Temp Index, Elec	130	°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			
Mold Shrinkage, flow (2)	0.5 - 0.7	%	GE Method
Density	0.04	lb/in ³	ISO 1183

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 by this or any other material under actual fire conditions.
4) Own measurement according to UL.

Source, GMD, Last Update:11/06/2000

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
PHYSICAL			
Density	0.04	lb/in ³	ISO 1183
Water Absorption, equilibrium, 73°F	0.35	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	6	cm ³ /10 min	ISO 1133
OPTICAL			
Light Transmission	88 - 90	%	ASTM D 1003
Haze, 0.100"	<0.8	%	ASTM D 1003
Refractive Index	1.586	-	ISO 489
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.059	in	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	0.118	in	UL 94
Glow Wire Flammability Index 850°C, passes at	0.039	in	IEC 60695-2-12
Oxygen Index (LOI)	25	%	ISO 4589

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	250	°F
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	550 - 610	°F
Nozzle Temperature	540 - 590	°F
Front - Zone 3 Temperature	550 - 610	°F
Middle - Zone 2 Temperature	540 - 590	°F
Rear - Zone 1 Temperature	520 - 570	°F
Hopper Temperature	140 - 180	°F
Mold Temperature	180 - 250	°F

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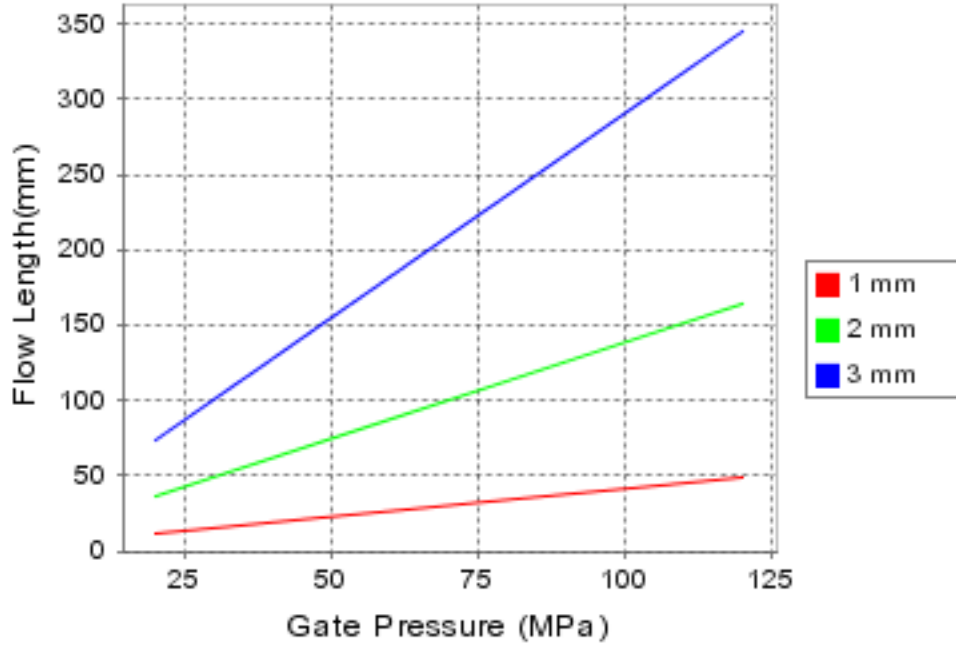
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Lexan® 104R

Melt Temperature : 300°C

Mold Temperature : 100°C



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

® Moldflow is a registered trademark of the Moldflow Corporation.

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