



Lexan* Resin ML3513

Europe-Africa-Middle East: COMMERCIAL

LEXAN ML3513 is a high viscosity, 30% short fibre glass reinforced, flame retardant grade, especially designed for connectors and relay separators.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	24	mg/1000cy	SABIC Method
Tensile Stress, break, 5 mm/min	75	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	4500	MPa	ISO 527
Flexural Stress, break, 2 mm/min	120	MPa	ISO 178
Flexural Modulus, 2 mm/min	4500	MPa	ISO 178
Hardness, H358/30	135	MPa	ISO 2039-1
Hardness, Rockwell L	104	-	ISO 2039-2
IMPACT			
Charpy Impact, unnotched, 23°C	50	kJ/m ²	ISO 179/2C
Izod Impact, unnotched 80*10*3 +23°C	35	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	35	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	7	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	6	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	6	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	5	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	40	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	40	kJ/m ²	ISO 179/1eU
Charpy Impact, notched, 23°C	7	kJ/m ²	ISO 179/2C
Charpy Impact, notched, -20°C	6	kJ/m ²	ISO 179/2C
THERMAL			
Thermal Conductivity	0.22	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	2.8E-05	1/°C	ISO 11359-2



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THERMAL			
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	153	°C	ISO 306
Vicat Softening Temp, Rate B/50	147	°C	ISO 306
Vicat Softening Temp, Rate B/120	150	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	145	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Ae
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2)	0.2 - 0.4	%	SABIC Method
Density	1.42	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.26	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.11	%	ISO 62
Melt Volume Rate, MVR at 265°C/10.0 kg	10	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 300°C/1.2 kg	4	cm ³ /10 min	ISO 1133
OPTICAL			
Haze, 2.54 mm	NA	%	ASTM D 1003
Refractive Index	NA	-	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	16	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	3.1	-	IEC 60250
Relative Permittivity, 1 MHz	3	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
ELECTRICAL			
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	150	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	33	%	ISO 4589



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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	120	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	290 - 320	°C
Nozzle Temperature	280 - 310	°C
Front - Zone 3 Temperature	290 - 320	°C
Middle - Zone 2 Temperature	280 - 310	°C
Rear - Zone 1 Temperature	270 - 300	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 120	°C



Lexan[®] Resin ML3513

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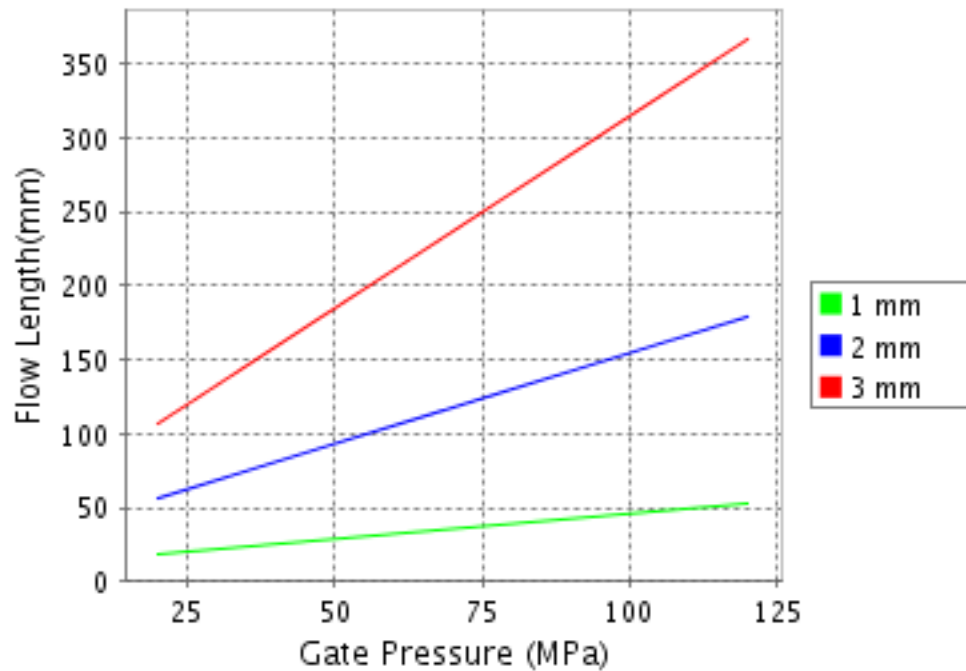
CALCULATED FLOW LENGTH INDICATION

Moldflow[®] Radial Flow Analysis

Lexan[®] ML3513

Melt Temperature : 305°C

Mold Temperature : 95°C



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

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