



Lexan* Resin DMX1214

Asia Pacific: COMMERCIAL

Lexan* DMX1214 resin is an improved flow, transparent copolycarbonate resin with improved scratch resistance.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	780	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	650	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	92	%	ASTM D 638
Tensile Modulus, 50 mm/min	28800	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1180	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	26800	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	77	MPa	ISO 527
Tensile Stress, break, 50 mm/min	62	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	8	%	ISO 527
Tensile Strain, break, 50 mm/min	60	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	101	MPa	ISO 178
Flexural Modulus, 2 mm/min	2310	MPa	ISO 178
Pencil Hardness test, 1kgf	F	-	ASTM D 3363
Erichson scratch depth, 6N	14	micrometer	SABIC Method
IMPACT			
Izod Impact, unnotched, 23°C	NB	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	3	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	3	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	693	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m ²	ISO 180/1U



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IMPACT			
Izod Impact, unnotched 80*10*3 -30°C	93	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	6	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	4	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	3	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	3	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	133	kJ/m ²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	138	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D 648
CTE, -40°C to 95°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	6.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	142	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	134	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	121	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.18	-	ASTM D 792
Specific Volume	0.85	cm ³ /g	ASTM D 792
Density	1.17	g/cm ³	ASTM D 792
Water Absorption, 24 hours	0.1	%	ASTM D 570



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PHYSICAL			
Water Absorption, equilibrium, 23C	0.3	%	ASTM D 570
Water Absorption, 50% RH, equilib	0.14	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	0.05	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	17.1	g/10 min	ASTM D 1238
Density	1.17	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.3	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.14	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	16	cm ³ /10 min	ISO 1133
OPTICAL			
Light Transmission	88	%	ASTM D 1003
Haze	<0.8	%	ASTM D 1003
Refractive Index	1.584	-	ASTM D 542
Refractive Index	1.584	-	ISO 489
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.75	mm	UL 94



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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	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	260 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	70 - 95	°C

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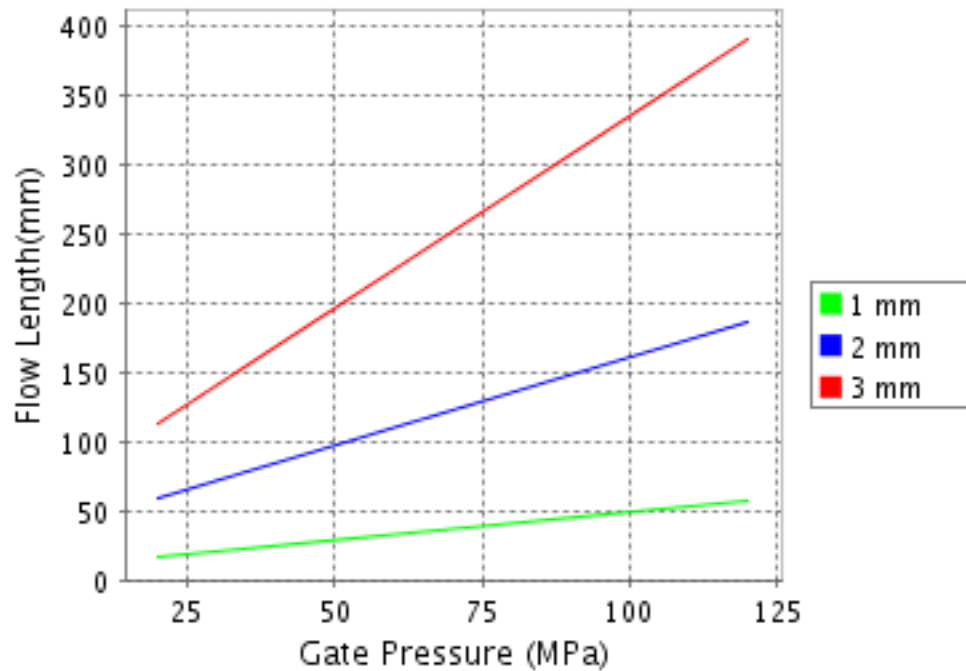
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Lexan® DMX1214

Melt Temperature : 290°C

Mold Temperature : 90°C



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

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