

## Lexan\* Resin DMX2415

### Asia Pacific: COMMERCIAL

Lexan\* DMX2415 is a polycarbonate resin with improved scratch resistance. Lexan\* DMX2415 is available in transparent, translucent, and opaque colors.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	74	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	65.8	%	ASTM D 638
Tensile Modulus, 5 mm/min	3010	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	120	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2610	MPa	ASTM D 790
Hardness, Rockwell L	108	-	ASTM D 785
Hardness, Rockwell M	93	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	ASTM D 1044
Taber Abrasion, CS-17, 1 kg	10	mg/1000cy	GE Method
Tensile Stress, yield, 50 mm/min	78	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7.4	%	ISO 527
Tensile Strain, break, 50 mm/min	47.7	%	ISO 527
Tensile Modulus, 1 mm/min	2490	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	109	MPa	ISO 178
Flexural Modulus, 2 mm/min	2540	MPa	ISO 178
Hardness, H358/30	128	MPa	ISO 2039-1
Pencil Hardness test, 1kgf	H	-	ASTM D 3363
Erichson scratch depth, 6N	14	micrometer	GE Method
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812

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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: 12/08/2006

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Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812
Izod Impact, notched, 23°C	20	J/m	ASTM D 256
Izod Impact, notched, -30°C	12	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	19	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	3	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m <sup>2</sup>	ISO 179/1eU
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	137	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	133	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	119	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	7.E-05	1/°C	ASTM E 831
Specific Heat	1.2	J/g-°C	ASTM C 351
Thermal Conductivity	0.2	W/m-°C	ASTM C 177
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	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	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	131	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	116	°C	ISO 75/Ae
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.85	cm <sup>3</sup> /g	ASTM D 792
Density	1.17	g/cm <sup>3</sup>	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.28	%	ASTM D 570
Water Absorption, 50% RH, equilib	0.13	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	0.04	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	GE Method
Melt Flow Rate, 300°C/1.2 kgf	13.5	g/10 min	ASTM D 1238
Density	1.17	g/cm <sup>3</sup>	ISO 1183

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HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	116	°C	ISO 75/Ae
<b>PHYSICAL</b>			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.85	cm <sup>3</sup> /g	ASTM D 792
Density	1.17	g/cm <sup>3</sup>	ASTM D 792
Water Absorption, 24 hours	0.08	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.28	%	ASTM D 570
Water Absorption, 50% RH, equilib	0.13	%	ASTM D 570
Moisture Absorption, 50% RH, 24 hrs	0.04	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	GE Method
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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	280 - 300	°C
Nozzle Temperature	270 - 290	°C
Front - Zone 3 Temperature	280 - 300	°C
Middle - Zone 2 Temperature	270 - 290	°C
Rear - Zone 1 Temperature	260 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 100	°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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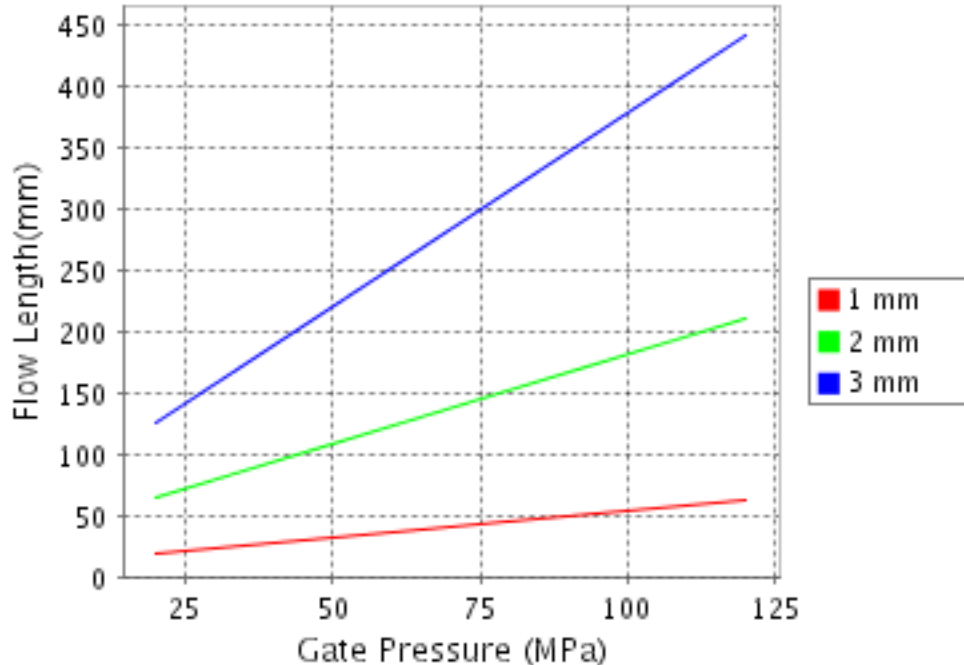
**CALCULATED FLOW LENGTH INDICATION**

**Moldflow® Radial Flow Analysis**

**Lexan® DMX2415**

**Melt Temperature : 295°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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