SABIC Innovative Plastics™

Lexan* Resin DMX9455

Europe-Africa-Middle East: COMMERCIAL

Lexan* DMX9455 is a standard flow, flame retardant, V0/1.5mm, opaque polycarbonate copolymer resin with improved scratch resistance.

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	80	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	65	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	70	%	ASTM D 638
Tensile Modulus, 50 mm/min	2900	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	2600	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	SABIC Method
Tensile Stress, yield, 50 mm/min	80	MPa	ISO 527
Tensile Stress, break, 50 mm/min	60	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	7	%	ISO 527
Tensile Strain, break, 50 mm/min	40	%	ISO 527
Tensile Modulus, 1 mm/min	2450	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	108	MPa	ISO 178
Flexural Modulus, 2 mm/min	2450	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	SABIC Method
IMPACT			
Izod Impact, unnotched, 23°C	NB	J/m	ASTM D 4812
Izod Impact, notched, 23°C	30	J/m	ASTM D 256
Izod Impact, notched, -30°C	30	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	30	J	ASTM D 3763

1) Typical values only. Variations within normal tolerances are possible for variose colours.All values are measured at least after 48 hours storage at 230C/50% relative humidity.
All properties, expect 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.
5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
IMPACT			
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	45	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	4	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	3	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	47	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	139	°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	1.4	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	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306

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THERMAL			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	131	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	118	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.2	-	ASTM D 792
Specific Volume	0.85	cm³/g	ASTM D 792
Density	1.17	g/cm³	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 (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	14.5	g/10 min	ASTM D 1238
Density	1.17	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.27	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.13	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	13	cm³/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-2 Flame Class Rating (3)	1	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	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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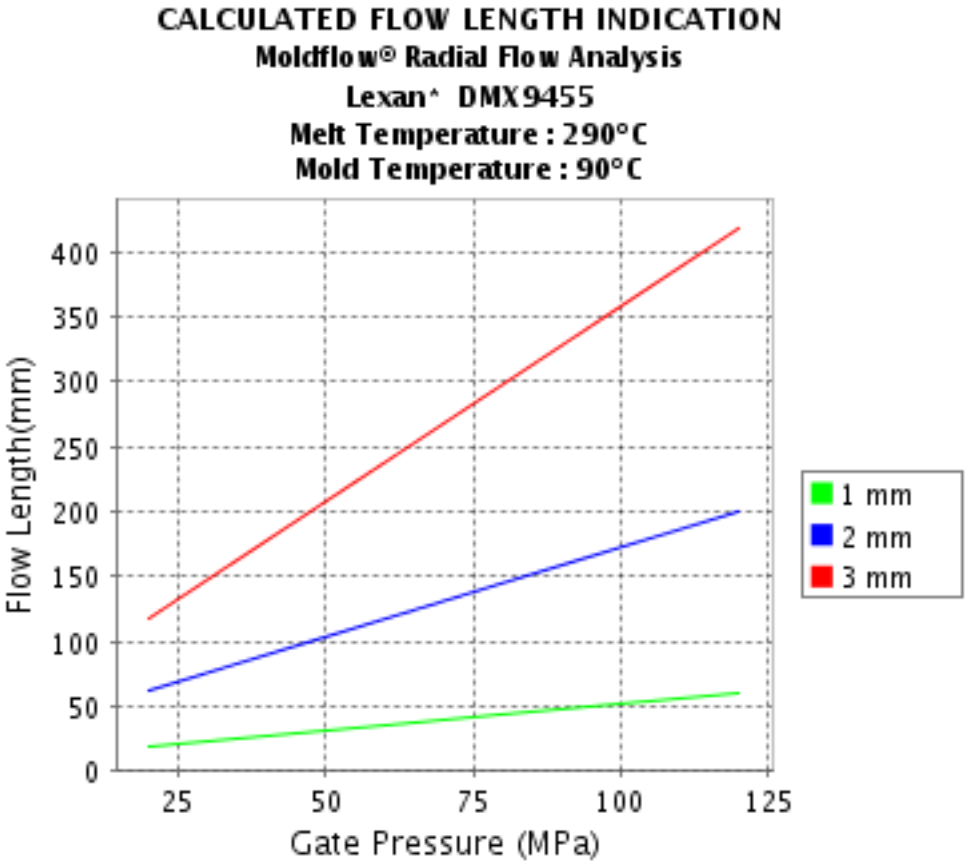

Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

Moldflow is a registered trademark of the Moldflow Corporation.

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