

## Lexan\* Resin EXL1182T

Americas: COMMERCIAL

Lexan\* EXL1182T polycarbonate (PC) siloxane copolymer resin is a UV stabilized, enhanced release transparent injection molding (IM) grade. This resin offers good low temperature (-20 C) ductility in combination with high flow characteristics and excellent processability with opportunities for shorter IM cycle times compared to standard PC resins. Lexan EXL1182T resin is a UV stabilized, enhanced release product available in transparent and opaque colors and may be an excellent candidate for a broad range of applications.

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	58	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	57	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	117.9	%	ASTM D 638
Tensile Modulus, 50 mm/min	2260	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	94	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2240	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	56	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.4	%	ISO 527
Tensile Strain, break, 50 mm/min	119.4	%	ISO 527
Tensile Modulus, 1 mm/min	2340	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	89	MPa	ISO 178
Flexural Modulus, 2 mm/min	2140	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	736	J/m	ASTM D 256
Izod Impact, notched, -30°C	618	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	74	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	47	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	24	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	61	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	17	kJ/m <sup>2</sup>	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate A/50	138	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	121	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.48E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	7.64E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	7.48E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.64E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	116	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.19	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.4 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	20	g/10 min	ASTM D 1238

Density	1.19	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.24	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	19	cm <sup>3</sup> /10 min	ISO 1133

Source GMD, last updated:11/16/2007

## Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	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	270 - 295	°C
Mold Temperature	70 - 95	°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

Source GMD, last updated:11/16/2007

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

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