SABIC Innovative Plastics™

Lexan* Resin EXRL0722 Europe-Africa-Middle East: DEVELOPMENTAL

Optical quality, high purity PC resin for CD/DVD and BD applications at short cycle times

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	60	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	60	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	>40	%	ASTM D 638
Tensile Modulus, 50 mm/min	2350	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	90	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2300	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	60	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	6	%	ISO 527
Tensile Strain, break, 50 mm/min	>40	%	ISO 527
Tensile Modulus, 1 mm/min	2350	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched 80*10*3 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	12	kJ/m²	ISO 180/1A
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	138	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	132	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	122	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.E-05	1/°C	ASTM E 831
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
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	138	°C	ISO 306
Vicat Softening Temp, Rate B/120	140	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	132	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	122	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.2	-	ASTM D 792
Water Absorption, equilibrium, 23C	0.35	%	ASTM D 570
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 250°C/1.2 kgf	10	g/10 min	ASTM D 1238
Density	1.2	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.35	%	ISO 62

Melt Volume Rate, MVR at 250°C/1.2 kg	9	cm³/10 min	ISO 1133
OPTICAL	Value	Unit	Standard
Light Transmission, 2.54 mm	>90	%	ASTM D 1003
Haze, 2.54 mm	<0.7	%	ASTM D 1003
Refractive Index	1.586	-	ISO 489
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Relative Permittivity, 1 MHz	3	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250

Source GMD, last updated:2010/05/17

Processing

Parameter Injection Molding	Value	Unit
Drying Temperature	120	°C
Drying Time	4 - 6	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	340 - 370	°C
Nozzle Temperature	340 - 370	°C
Front - Zone 3 Temperature	350 - 380	°C
Middle - Zone 2 Temperature	320 - 340	°C
Rear - Zone 1 Temperature	270 - 290	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	75 - 95	°C

Source GMD, last updated:2010/05/17

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.
(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.