SABIC Innovative Plastics™

Lexan* Resin FXG1413T

Americas: COMMERCIAL

PC-siloxane copolymer in special "Diamond Sparkle" colors. Medium flow. Improved toughness compared to medium flow standard PC in same color. Color package may affect performance.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	59	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	47	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	69	%	ASTM D 638
Tensile Modulus, 50 mm/min	2270	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	85	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2270	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	57	MPa	ISO 527
Tensile Stress, break, 50 mm/min	46	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5.6	%	ISO 527
Tensile Strain, break, 50 mm/min	38	%	ISO 527
Tensile Modulus, 1 mm/min	2330	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2190	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	570	J/m	ASTM D 256
Izod Impact, notched, -30°C	376	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	54	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	36	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	16	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	19	kJ/m²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	142	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	123	°C	ASTM D 648
CTE, -40°C to 95°C, flow	7.15E-05	1/°C	ASTM E 831
CTE, -40°C to 95°C, xflow	7.93E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	7.15E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	7.93E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASS	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	119	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.18	-	ASTM D 792
Mold Shrinkage on Tensile Bar, flow (2)	0.4 - 0.8	%	SABIC Method
Mold Shrinkage, flow, 3.2 mm	0.4 - 0.8	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.4 - 0.8	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	10	g/10 min	ASTM D 1238

Density	1.18	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.09	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm³/10 min	ISO 1133

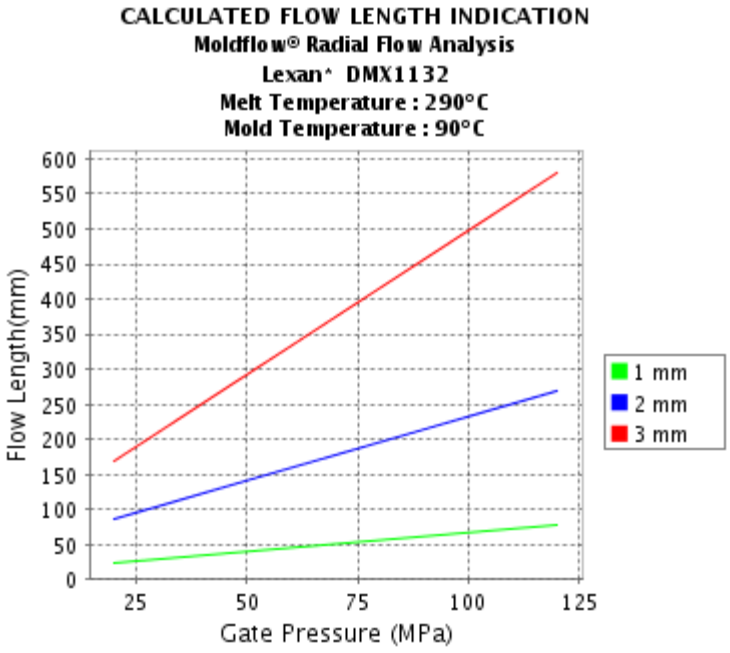
Source GMD, last updated:04/12/2004

Processing

Parameter Injection Molding	Value	Unit
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	215 - 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:04/12/2004

• NOTE: Back Pressure, Screw Speed, Shot to Cylinder Size and Vent Depth are only mentioned as general guidelines. These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.



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

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.