

Xylex * Resin FXY311DF

Americas: COMMERCIAL

Xylex in Diffusion Effects. Color package may affect performance.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 50 mm/min	46	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	49	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5.4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	150	%	ASTM D 638
Tensile Modulus, 50 mm/min	1570	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	71	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	1810	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	45	MPa	ISO 527
Tensile Stress, break, 50 mm/min	47	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.8	%	ISO 527
Tensile Strain, break, 50 mm/min	146	%	ISO 527
Tensile Modulus, 1 mm/min	1720	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	67	MPa	ISO 178
Flexural Modulus, 2 mm/min	1560	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	724	J/m	ASTM D 256
Izod Impact, notched, -30°C	320	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	43	J	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	53	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	17	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	62	kJ/m ²	ISO 179/1eA
THERMAL	Value	Unit	Standard
Vicat Softening Temp, Rate B/50	102	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	98	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	83	°C	ASTM D 648
CTE, -40°C to 40°C, flow	9.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	9.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	9.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	9.1E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	102	°C	ISO 306
Vicat Softening Temp, Rate B/120	103	°C	ISO 306
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	82	°C	ISO 75/Ae
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.15	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 265°C/2.16kg	8	g/10 min	ASTM D 1238
Density	1.15	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.17	%	ISO 62

Moisture Absorption (23°C / 50% RH)	0.6	%	ISO 62
Melt Volume Rate, MVR at 265°C/2.16 kg	9	cm ³ /10 min	ISO 1133

Source GMD, last updated:01/22/2006

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	65 - 80	°C
Drying Time	3 - 5	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	250 - 270	°C
Nozzle Temperature	250 - 270	°C
Front - Zone 3 Temperature	250 - 270	°C
Middle - Zone 2 Temperature	245 - 270	°C
Rear - Zone 1 Temperature	245 - 260	°C
Mold Temperature	45 - 60	°C
Back Pressure	0.1 - 0.5	MPa
Screw Speed	20 - 100	rpm
Shot to Cylinder Size	40 - 80	%
Vent Depth	0.013 - 0.02	mm

Source GMD, last updated:01/22/2006

- Parts may initially appear hazy directly from the mold, but will clear upon reaching ambient temperature.

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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