

Xylex* Resin FXY311DF

Asia Pacific: COMMERCIAL

Xylex in Diffusion Effects. Color package may affect performance.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	460	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	500	kgf/cm ²	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	16000	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	720	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	18400	kgf/cm ²	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			
Izod Impact, notched, 23°C	73	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	32	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	447	cm-kgf	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			
Vicat Softening Temp, Rate B/50	102	°C	ASTM D 1525



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THERMAL			
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			
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



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PROCESSING PARAMETERS	TYPICAL 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

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

