



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

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.
All properties, except the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. 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) Own measurement according to UL.





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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
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.

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