



**Kynar Super Flex® 2500 PVDF Copolymer**

Copolymer Series, Kynar® components are used extensively in the high purity semiconductor market, the pulp and paper industry, nuclear waste processing, and the general chemical processing industry. Information provided by Arkema Group

<b>Physical Properties</b>	Metric	English	Comments
Specific Gravity	1.80 - 1.82 g/cc	1.80 - 1.82 g/cc	ASTM D792
Water Absorption	0.0400 - 0.0700 %	0.0400 - 0.0700 %	24 hr / 20°C; ASTM D570
Viscosity	8.00e+6 cP @Shear Rate 100 1/s, Temperature 232 °C	8.00e+6 cP @Shear Rate 100 1/s, Temperature 450 °F	ASTM D3835
Ash	0.000 - 5.00 %	0.000 - 5.00 %	Thermal Decomposition/ in air
<b>Mechanical Properties</b>	Metric	English	Comments
Hardness, Shore D	55.0 - 60.0	55.0 - 60.0	ASTM D2240
Tensile Strength, Ultimate	27.6 - 41.4 MPa	4000 - 6000 psi	ASTM D638
Tensile Strength, Yield	11.7 - 19.3 MPa	1700 - 2800 psi	ASTM D638
Elongation at Break	500 - 800 %	500 - 800 %	ASTM D638
Elongation at Yield	12.0 - 25.0 %	12.0 - 25.0 %	ASTM D638
Tensile Modulus	0.241 - 0.379 GPa	35.0 - 55.0 ksi	ASTM D638
Flexural Modulus	0.193 - 0.248 GPa	28.0 - 36.0 ksi	ASTM D790
Flexural Strength	10.3 - 17.2 MPa	1500 - 2500 psi	@ 5% strain; ASTM D790
Compressive Strength	13.8 - 20.7 MPa	2000 - 3000 psi	ASTM D695
Izod Impact, Unnotched	NB	NB	ASTM D256
Coefficient of Friction	0.540	0.540	vs. Steel (Dynamic); ASTM D1894
Coefficient of Friction, Static	0.490	0.490	vs. Steel; ASTM D1894
Taber Abrasion, mg/1000 Cycles	28.0 - 33.0	28.0 - 33.0	CS-17 1000g:load
Izod Impact, Notched	NB	NB	ASTM D256

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+14 ohm-cm	2.00e+14 ohm-cm	DC, 65% RH; ASTM D257
Dielectric Constant 	4.50 - 5.80 @Frequency 1e+8 Hz	4.50 - 5.80 @Frequency 1e+8 Hz	ASTM D150
Dielectric Strength	10.9 - 13.5 @Frequency 100 Hz	10.9 - 13.5 @Frequency 100 Hz	ASTM D150
Dissipation Factor 	31.5 - 43.3 kV/mm	800 - 1100 kV/in	ASTM D149
	0.0600 - 0.100 @Frequency 100 Hz	0.0600 - 0.100 @Frequency 100 Hz	ASTM D150
	0.250 - 0.290 @Frequency 1e+8 Hz	0.250 - 0.290 @Frequency 1e+8 Hz	ASTM D150

Thermal Properties	Metric	English	Comments
CTE, linear	153 - 194 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	85.0 - 108 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	ASTM D696
Specific Heat Capacity	1.17 - 1.51 J/g- $^\circ\text{C}$	0.280 - 0.360 BTU/lb- $^\circ\text{F}$	DSC
Thermal Conductivity	0.144 - 0.180 W/m-K	1.00 - 1.25 BTU-in/hr-ft $^2\cdot^\circ\text{F}$	ASTM D433
Transformation Temperature, Tg	-46.0 - -40.0 $^\circ\text{C}$	-50.8 - -40.0 $^\circ\text{F}$	(DMA) @ 1 Hz
Deflection Temperature at 1.8 MPa (264 psi)	26.7 - 37.8 $^\circ\text{C}$	80.0 - 100 $^\circ\text{F}$	ASTM D648
Decomposition Temperature	375 $^\circ\text{C}$	707 $^\circ\text{F}$	1% wt. loss / in air
Oxygen Index	410 $^\circ\text{C}$ 42.0 %	770 $^\circ\text{F}$ 42.0 %	1% wt. loss / in nitrogen Limiting, (Optional product available with higher value of 95% O $_2$ ; ASTM D2868

Optical Properties	Metric	English	Comments
Refractive Index	1.40	1.40	at Sodium D line 77 $^\circ\text{F}$ ; ASTM D542

Processing Properties	Metric	English	Comments
Melt Temperature	116 - 121 $^\circ\text{C}$	240 - 250 $^\circ\text{F}$	ASTM D3418

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's disclaimer and terms of use regarding this information.

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