

Arkema Group Kynar Flex® 2900 PVDF Copolymer (discontinued **)

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF , Polyvinylidene fluoride (PVDF), Molded/Extruded

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arkema-Group-Kynar-Flex-2900-PVDF-Copolymer-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.76 - 1.79 g/cc	1.76 - 1.79 g/cc	ASTM D792
Water Absorption	0.030 - 0.050 %	0.030 - 0.050 %	24 hr / 20°C; ASTM D570
Ash	0.00 - 5.0 %	0.00 - 5.0 %	Thermal Decomposition/ in air

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	65 - 70	65 - 70	ASTM D2240
Tensile Strength, Ultimate	24.1 - 41.4 MPa	3500 - 6000 psi	ASTM D638
Tensile Strength, Yield	20.0 - 27.6 MPa	2900 - 4000 psi	ASTM D638
Elongation at Break	200 - 400 %	200 - 400 %	ASTM D638
Elongation at Yield	10 - 20 %	10 - 20 %	ASTM D638
Tensile Modulus	0.552 - 0.896 GPa	80.0 - 130 ksi	ASTM D638
Flexural Strength	20.7 - 34.5 MPa	3000 - 5000 psi	@ 5% strain; ASTM D790
Flexural Modulus	0.621 - 0.827 GPa	90.0 - 120 ksi	ASTM D790
Compressive Strength	31.0 - 41.4 MPa	4500 - 6000 psi	ASTM D695
Izod Impact, Notched	6.41 - 10.7 J/cm	12.0 - 20.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256
Coefficient of Friction, Dynamic	0.33	0.33	vs. Steel; ASTM D1894
Coefficient of Friction, Static	0.33	0.33	vs. Steel; ASTM D1894
Taber Abrasion, mg/1000 Cycles	16 - 19	16 - 19	CS-17 1000g:load

Thermal Properties	Metric	English	Comments
CTE, linear	126 - 185 µm/m-°C	70.0 - 103 µin/in-°F	ASTM D696

Thermal Properties	@Temperature 20.0 °C Metric	@Temperature 68.0 °F English	Comments
Specific Heat Capacity	1.17 - 1.51 J/g-°C	0.280 - 0.360 BTU/lb-°F	DSC
Thermal Conductivity	0.144 - 0.180 W/m-K	1.00 - 1.25 BTU-in/hr- ft ² -°F	ASTM D433
Melting Point	141 - 145 °C	285 - 293 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	60.0 - 75.0 °C	140 - 167 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	40.0 - 55.0 °C	104 - 131 °F	ASTM D648
Glass Transition Temp, Tg	-42.0 - -39.0 °C	-43.6 - -38.2 °F	(DMA) @ 1 Hz
Decomposition Temperature	375 °C	707 °F	1% wt. loss / in air
	410 °C	770 °F	1% wt. loss / in nitrogen
Flammability, UL94	V-0	V-0	
Oxygen Index	42 %	42 %	Optional product available with value of 95% O ₂ ; ASTM D2868

Optical Properties	Metric	English	Comments
Refractive Index	1.41	1.41	Sodium D line; ASTM D542
	@Temperature 25.0 °C, Wavelength 589.3 nm	@Temperature 77.0 °F, Wavelength 589.3 nm	

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+14 ohm-cm	2.00e+14 ohm-cm	DC, 65% RH; ASTM D257
Dielectric Constant	3.5 - 4.3	3.5 - 4.3	ASTM D150
	@Frequency 1e+8 Hz	@Frequency 1e+8 Hz	
	9.4 - 10.6	9.4 - 10.6	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	51.2 - 59.1 kV/mm	1300 - 1500 kV/in	ASTM D149
Dissipation Factor	0.090 - 0.14	0.090 - 0.14	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.19 - 0.21	0.19 - 0.21	ASTM D150
	@Frequency 1e+8 Hz	@Frequency 1e+8 Hz	

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