

Arkema Group KYNAR FLEX® 2750-01 Polyvinylidene Fluoride Copolymer - Extrusion & Molding

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

Material Notes:

Characteristics: Natural resin - translucent, off-white hemispheres. Very flexible, lubricated. High stability in harsh thermal, chemical and ultraviolet environments. High toughness and mechanical strength, low permeability, abrasion resistance; high

purityApplications:Chemical processing – production, storage and transfer of corrosive fluidsElectronics – protective sheathing, plenum and wiring insulationSemi-conductor industryFood stuff and Healthcare industriesTransportation – fuel line and pipe, thermoformed body componentsInformation provided by Arkema Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arkema-Group-KYNAR-FLEX-2750-01-Polyvinylidene-Fluoride-Copolymer-Extrusion-Molding.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.78 - 1.80 g/cc	1.78 - 1.80 g/cc	ASTM D792
Bulk Density	0.961 g/cc	0.0347 lb/in ³	
Water Absorption	0.030 - 0.060 % @Time 86400 sec	0.030 - 0.060 % @Time 24.0 hour	Immersion; ASTM D570
Viscosity	2.00e+6 - 2.50e+6 cP @Shear Rate 100 1/s, Temperature 232 °C	2.00e+6 - 2.50e+6 cP @Shear Rate 100 1/s, Temperature 450 °F	Melt Viscosity; ASTM D3835
Melt Flow	4.0 - 14 g/10 min @Load 12.5 kg, Temperature 232 °C	4.0 - 14 g/10 min @Load 27.6 lb, Temperature 450 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	57 - 62	57 - 62	ASTM D2240
Tensile Strength at Break	20.0 - 27.0 MPa	2900 - 3920 psi	ASTM D638
Tensile Strength, Yield	14.0 - 21.0 MPa	2030 - 3050 psi	ASTM D638
Elongation at Break	200 - 400 %	200 - 400 %	ASTM D638
Elongation at Yield	15 - 25 %	15 - 25 %	ASTM D638
Tensile Modulus	0.276 - 0.448 GPa	40.0 - 65.0 ksi	ASTM D638
Flexural Strength	14.0 - 24.0 MPa @Strain 5.00 %	2030 - 3480 psi @Strain 5.00 %	ASTM D790
Flexural Modulus	0.276 - 0.414 GPa	40.0 - 60.0 ksi	ASTM D790

Mechanical Properties	Metric	English	Comments
	14.0 - 31.0 MPa	5000 - 4500 psi	ASTM D638
Izod Impact, Notched	>= NB	>= NB	ASTM D256
Izod Impact, Unnotched	>= NB	>= NB	ASTM D256
Coefficient of Friction, Dynamic	0.54	0.54	vs. steel; ASTM D1894
Coefficient of Friction, Static	0.55	0.55	vs. steel; ASTM D1894
Taber Abrasion, mg/1000 Cycles	21 - 25	21 - 25	1000 g pad; CS-17

Thermal Properties	Metric	English	Comments
CTE, linear	162 - 216 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	90.0 - 120 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
Specific Heat Capacity	1.17 - 1.51 J/g $\cdot^{\circ}\text{C}$	0.280 - 0.360 BTU/lb $\cdot^{\circ}\text{F}$	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
Melting Point	130 - 138 $^{\circ}\text{C}$	266 - 280 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	49.0 - 65.0 $^{\circ}\text{C}$	120 - 149 $^{\circ}\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	35.0 - 51.0 $^{\circ}\text{C}$	95.0 - 124 $^{\circ}\text{F}$	ASTM D648
Glass Transition Temp, Tg	-42.0 - -40.0 $^{\circ}\text{C}$ @Frequency 1.00 Hz	-43.6 - -40.0 $^{\circ}\text{F}$ @Frequency 1.00 Hz	DMA
Decomposition Temperature	375 $^{\circ}\text{C}$	707 $^{\circ}\text{F}$	1% wt loss / in air; TGA
	410 $^{\circ}\text{C}$	770 $^{\circ}\text{F}$	1% wt loss / in nitrogen; TGA
Flammability, UL94	V-0	V-0	
Oxygen Index	43 %	43 %	ASTM D2868
	95 %	95 %	optional products; ASTM D2868

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+14 ohm-cm @Temperature 20.0 $^{\circ}\text{C}$	2.00e+14 ohm-cm @Temperature 68.0 $^{\circ}\text{F}$	65% RH; ASTM D257
Dielectric Constant	3.8 @Frequency 1.00e+8 Hz	3.8 @Frequency 1.00e+8 Hz	ASTM D150
	12.1	12.1	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	ASTM D150 Comments
Dielectric Strength	43.3 - 51.2 kV/mm	1100 - 1300 kV/in	ASTM D149
Dissipation Factor	0.020 - 0.24 @Frequency 100 Hz	0.020 - 0.24 @Frequency 100 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	195 - 220 °C	383 - 428 °F	Tube Extrusion
	200 - 220 °C	392 - 428 °F	Injection Molding
Middle Barrel Temperature	210 - 230 °C	410 - 446 °F	Injection Molding
	220 - 240 °C	428 - 464 °F	Tube Extrusion
Front Barrel Temperature	220 - 250 °C	428 - 482 °F	Tube Extrusion
	220 - 250 °C	428 - 482 °F	Injection Molding
Nozzle Temperature	210 - 245 °C	410 - 473 °F	Injection Molding
Die Temperature	220 - 250 °C	428 - 482 °F	Tube Extrusion
Head Temperature	220 - 250 °C	428 - 482 °F	Tube Extrusion
Mold Temperature	50.0 - 90.0 °C	122 - 194 °F	Injection Molding

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