

## Arkema Group KYNAR FLEX® 3120-15 Polyvinylidene Fluoride Copolymer - Extrusion & Molding

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

### Material Notes:

**Characteristics:** Natural resin - translucent, off-white hemispheres. Flexible, flame and smoke suppressant. High stability in harsh thermal, chemical and ultraviolet environments. High toughness and mechanical strength, low permeability, abrasion resistance; high purity

**Applications:** Chemical processing – production, storage and transfer of corrosive fluids  
Electronics – protective sheathing, plenum and wiring insulation  
Semi-conductor industry  
Food stuff and Healthcare industries  
Transportation – fuel line and pipe, thermoformed body components

Information provided by Arkema Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Arkema-Group-KYNAR-FLEX-3120-15-Polyvinylidene-Fluoride-Copolymer-Extrusion-Molding.php](http://www.lookpolymers.com/polymer_Arkema-Group-KYNAR-FLEX-3120-15-Polyvinylidene-Fluoride-Copolymer-Extrusion-Molding.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.76 - 1.79 g/cc	1.76 - 1.79 g/cc	ASTM D792
Bulk Density	0.961 g/cc	0.0347 lb/in <sup>3</sup>	
Water Absorption	0.030 - 0.050 % @Time 86400 sec	0.030 - 0.050 % @Time 24.0 hour	Immersion; ASTM D570
Viscosity	500000 - 1.20e+6 cP @Shear Rate 100 1/s, Temperature 232 °C	500000 - 1.20e+6 cP @Shear Rate 100 1/s, Temperature 450 °F	Melt Viscosity; ASTM D3835
Melt Flow	4.0 - 17.5 g/10 min @Load 3.80 kg, Temperature 232 °C	4.0 - 17.5 g/10 min @Load 8.38 lb, Temperature 450 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	65 - 70	65 - 70	ASTM D2240
Tensile Strength at Break	34.0 - 40.0 MPa	4930 - 5800 psi	ASTM D638
Tensile Strength, Yield	24.0 - 34.0 MPa	3480 - 4930 psi	ASTM D638
Elongation at Break	300 - 550 %	300 - 550 %	ASTM D638
Elongation at Yield	10 - 20 %	10 - 20 %	ASTM D638
Tensile Modulus	0.689 - 1.172 GPa	99.9 - 170.0 ksi	ASTM D638
Flexural Strength	20.0 - 34.0 MPa @Strain 5.00 %	2900 - 4930 psi @Strain 5.00 %	ASTM D790
Flexural Modulus	0.620 - 0.827 GPa	89.9 - 120 ksi	ASTM D790

Mechanical Properties	Metric	English	Comments
	41.0 MPa	5950 psi	
Izod Impact, Notched	>= NB	>= NB	ASTM D256
Izod Impact, Unnotched	>= NB	>= NB	ASTM D256
Coefficient of Friction, Dynamic	0.30	0.30	vs. steel; ASTM D1894
Coefficient of Friction, Static	0.31	0.31	vs. steel; ASTM D1894
Taber Abrasion, mg/1000 Cycles	16 - 19	16 - 19	1000 g pad; CS-17

Thermal Properties	Metric	English	Comments
CTE, linear	126 - 185 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	70.0 - 103 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	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	161 - 168 $^{\circ}\text{C}$	322 - 334 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	54.0 - 77.0 $^{\circ}\text{C}$	129 - 171 $^{\circ}\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	43.0 - 54.0 $^{\circ}\text{C}$	109 - 129 $^{\circ}\text{F}$	ASTM D648
Glass Transition Temp, Tg	-41.0 - -39.0 $^{\circ}\text{C}$ @Frequency 1.00 Hz	-41.8 - -38.2 $^{\circ}\text{F}$ @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	42 %	42 %	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	3.2 @Frequency 1.00e+8 Hz	3.2 @Frequency 1.00e+8 Hz	ASTM D150
	10.2	10.2	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	ASTM D150 Comments
Dielectric Strength	51.2 - 59.1 kV/mm	1300 - 1500 kV/in	ASTM D149
Dissipation Factor	0.020 - 0.19 @Frequency 100 Hz	0.020 - 0.19 @Frequency 100 Hz	ASTM D150

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	195 - 220 °C	383 - 428 °F	Tube Extrusion
Middle Barrel Temperature	210 - 240 °C	410 - 464 °F	Tube Extrusion
Front Barrel Temperature	210 - 240 °C	410 - 464 °F	Tube Extrusion
Die Temperature	210 - 250 °C	410 - 482 °F	Tube Extrusion
Head Temperature	210 - 240 °C	410 - 464 °F	Tube Extrusion

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China