

Arkema Group KYNAR® 460 Red Polyvinylidene Fluoride Homopolymer - Injection Molding and Extrusion

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

Material Notes:

Characteristics: Broad molecular weight distribution, pigmented. High stability in harsh thermal, chemical and ultraviolet environments.

High toughness and mechanical strength, low permeability, fire resistance, abrasion resistance; low-smoke emission; 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-460-Red-Polyvinylidene-Fluoride-Homopolymer-Injection-Molding-and-Extrusion.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.75 - 1.77 g/cc	1.75 - 1.77 g/cc	ASTM D792
Bulk Density	0.961 g/cc	0.0347 lb/in ³	
Water Absorption	0.020 - 0.040 % @Time 86400 sec	0.020 - 0.040 % @Time 24.0 hour	Immersion; ASTM D570
Viscosity	2.20e+6 - 3.20e+6 cP @Shear Rate 100 1/s, Temperature 232 °C	2.20e+6 - 3.20e+6 cP @Shear Rate 100 1/s, Temperature 450 °F	Melt Viscosity; ASTM D3835
Melt Flow	3.5 - 18 g/10 min @Load 21.6 kg, Temperature 232 °C	3.5 - 18 g/10 min @Load 47.6 lb, Temperature 450 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75 - 80	75 - 80	ASTM D2240
Tensile Strength at Break	31.0 - 48.0 MPa	4500 - 6960 psi	ASTM D638
Tensile Strength, Yield	34.0 - 52.0 MPa	4930 - 7540 psi	ASTM D638
Elongation at Break	50 - 250 %	50 - 250 %	ASTM D638
Elongation at Yield	10 - 15 %	10 - 15 %	ASTM D638
Tensile Modulus	1.034 - 1.379 GPa	150.0 - 200.0 ksi	ASTM D638
Flexural Strength	48.0 - 62.0 MPa @Strain 5.00 %	6960 - 8990 psi @Strain 5.00 %	ASTM D790

Flexural Modulus Mechanical Properties	1.379 - 1.792 GPa Metric	200.0 - 259.9 ksi English	ASTM D790 Comments
Compressive Strength	34.0 - 69.0 MPa	4930 - 10000 psi	ASTM D695
Izod Impact, Notched	1.07 - 2.14 J/cm	2.00 - 4.00 ft-lb/in	ASTM D256
Izod Impact, Unnotched	8.01 - 21.4 J/cm	15.0 - 40.0 ft-lb/in	ASTM D256
Coefficient of Friction, Dynamic	0.17	0.17	vs. steel; ASTM D1894
Coefficient of Friction, Static	0.23	0.23	vs. steel; ASTM D1894
Taber Abrasion, mg/1000 Cycles	7.0 - 9.0	7.0 - 9.0	1000 g pad; CS-17

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 - 126 $\mu\text{m/m}\cdot^\circ\text{C}$	50.0 - 70.0 $\mu\text{in/in}\cdot^\circ\text{F}$	ASTM D696
Specific Heat Capacity	1.17 - 1.46 J/g $\cdot^\circ\text{C}$	0.280 - 0.350 BTU/lb $\cdot^\circ\text{F}$	DSC
Thermal Conductivity	0.170 - 0.190 W/m-K	1.18 - 1.32 BTU-in/hr-ft $^2\cdot^\circ\text{F}$	ASTM D433
Melting Point	155 - 165 $^\circ\text{C}$	311 - 329 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	112 - 140 $^\circ\text{C}$	234 - 284 $^\circ\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	80.0 - 90.0 $^\circ\text{C}$	176 - 194 $^\circ\text{F}$	ASTM D648
Glass Transition Temp, Tg	-40.0 - -38.0 $^\circ\text{C}$ @Frequency 1.00 Hz	-40.0 - -36.4 $^\circ\text{F}$ @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	44 %	44 %	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	4.5 @Frequency 1.00e+8 Hz	4.5 @Frequency 1.00e+8 Hz	ASTM D150
	9.5	9.5	

Electrical Properties	Metric @Frequency 100 Hz	English @Frequency 100 Hz	ASTM D150 Comments
Dielectric Strength	63.0 kV/mm	1600 kV/in	ASTM D149
Dissipation Factor	0.010 - 0.21 @Frequency 100 Hz	0.010 - 0.21 @Frequency 100 Hz	ASTM D150

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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