

# TECHNICAL DATA SHEET

## PVDF

(Polyvinylidene Fluoride)

PVDF is a versatile fluoropolymer which is both strong and tough as reflected by its tensile properties and impact strengths. PVDF has excellent resistances to creep and fatigue. In thin sections, such as films, filament, and tubing, PVDF components are flexible and transparent. Where load bearing is important, PVDF fluoropolymers are rigid and resistant to creep under mechanical stress and load. Because PVDF is stable to sunlight, and other sources of ultraviolet radiation, it is widely used as base resins for long-lasting exterior coatings. An additional advantage over other fluoroplastics is that PVDF can be welded into tanks for acid and corrosive chemical processing in elevated temperature environments.

### TYPICAL PROPERTIES of KYNAR® PVDF

ASTM or UL test	Property	Kynar® PVDF
<b>PHYSICAL</b>		
D792	Density (lb/in <sup>3</sup> ) (g/cm <sup>3</sup> )	0.064 1.77
D570	Water Absorption, 24 hrs (%)	0.03
<b>MECHANICAL</b>		
D638	Tensile Strength (psi)	6,300
D638	Tensile Modulus (psi)	290,000
D638	Tensile Elongation at Break (%)	50
D790	Flexural Strength (psi)	9,700
D790	Flexural Modulus (psi)	290,000
D695	Compressive Strength (psi)	9,000
D695	Compressive Modulus (psi)	-
D2240	Hardness, Shore	D75
D256	IZOD Notched Impact (ft-lb/in)	3.0
<b>THERMAL</b>		
D696	Coefficient of Linear Thermal Expansion (x 10 <sup>-5</sup> in./in./°F)	6.6
D648	Heat Deflection Temp (°F / °C) at 264 psi	230 / 110
D3418	Melting Temp (°F / °C)	332 / 166
-	Max Operating Temp (°F / °C)	275 / 130
C177	Thermal Conductivity (BTU-in/ft <sup>2</sup> -hr-°F)	1.2
	(x 10 <sup>-4</sup> cal/cm-sec-°C)	4.1
UL94	Flammability Rating	V-0
<b>ELECTRICAL</b>		
D149	Dielectric Strength (V/mil) short time, 1/8" thick	1700
D150	Dielectric Constant at 1 MHz	8.5
D150	Dissipation Factor at 1 MHz	0.05
D257	Volume Resistivity (ohm-cm)at 50% RH	1.5 x 10 <sup>15</sup>

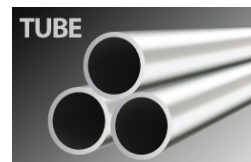
### Benefits

- Light weight
- Low thermal conductivity
- Chemical corrosion resistance
- Heat resistance
- Mechanical strength and toughness
- High abrasion resistance
- Resistant to most chemicals and solvents
- Low permeability to most gases and liquids
- Unaffected by long-term exposure to ultraviolet radiation

### Applications

- Jacketing for fiber optic cables
- Tank lining
- Semiconductor processing
- Chemical processing
- Heat exchangers

### SHAPES AVAILABLE



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NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.

All values at 73°F (23°C) unless otherwise noted.