

# PVDF

(polyvinylidene fluoride)

Manufactured from Kynar® polyvinylidene fluoride resin. This material offers excellent corrosion and chemical resistance at both ambient and elevated temperatures. PVDF is also inherently UV stable, mechanically tough, abrasion and flame resistant.

The following physical property information is based on typical values of the base resin polyvinylidene fluoride resin.

	Units	ASTM Test	Kynar 740	Kynar 1000 HD	Kynar 2850
<b>Mechanical</b>					
Flexural Modulus	psi	D790	290,000	290,000	170,000
Flexural Strength	psi	D790	8,000	8,000	3,500
Hardness-Shore D	—	D2240	D77	D77	D70
Izod Impact Strength					
Notched	ft•lbs/in	D256	3	3	8
Un-Notched	ft•lbs/in	D256	20.0-80.0	20.0-80.0	no break
Tensile Elongation					
@break	%	D638	100	100	350
@yield	%	D638	7.0-13.0	7.0-13.0	10.0-20.0
Tensile Modulus	psi	D638	250,000	250,000	125,000
Tensile Strength @yield	psi	D638	7,000	7,000	5,000
<b>Thermal</b>					
Coefficient of Thermal Expansion in/in/°F		D696	6.6x10 <sup>-5</sup>	6.6x10 <sup>-5</sup>	7.8x10 <sup>-5</sup>
Continuous Use Temperature	°F	—	280	280	240
Flammability Rating-UL94	—	—	V-0	V-0	V-0
UL2360	—	—	Class II	Class I	—
FM4910	—	—	Listed	Resin	Listed
Heat Deflection Temperature					
@66 psi	°F	D648	257-284	257-284	237
@264 psi	°F	D648	230	230	125
Limiting Oxygen Index	%	D2863	43	43	42
Melt Temperature	°F	D4591	335	335	315
<b>Electrical</b>					
Dielectric Constant @1kHz	—	D150	8.5	8.5	7.5
Dielectric Strength @5mil	V/mil	D149	1,600	1,600	—
Volume Resistivity	ohm•cm	D257	2.0x10 <sup>14</sup>	2.0x10 <sup>14</sup>	2.0x10 <sup>14</sup>
<b>Other</b>					
Specific Gravity	—	D792	1.78	1.78	1.78
Water Absorption @24 hours	%	D570	0.03	0.03	0.04

# WESTLAKE PLASTICS COMPANY

**World Headquarters**  
P.O. Box 127, Lenni, PA 19052  
1-800-999-1700 • Fax: (610) 459-1084

www.westlakeplastics.com

## Westlake Product Bulletin



### Applications Include:

- Chemical Process/Storage
- Fluid handling
- Semiconductor equipment
- Fire-safe componentry
- DI Water Systems

### Advantages of Kynar:

- High purity
- Flame resistant
- Easy to machine
- Excellent weatherability
- Resin meets the requirements of FDA, USDA, USPXX Class VI, 3A, UL, V-0, FM 4910

### Manufacturing Capabilities:

- Rod:** 1/8" to 15" diameter
- Sheet (Extruded):** .030" to 4" thick
- Sheet (Comp. Molded):** 1/8" to 4" thick
- Sheet (Fabric Backed):** .060" to 3/16" thick
- Film:** .002" to .029" thick
- Tube:** 1 1/8" to 12" O.D. (custom basis)
- Welding Rod:** 1/8" and 5/32" diameter

### Colors/Grades:

- 740/2850 - Natural Beige (custom colors available)
- 1000 HD - Natural White

\*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

**West Coast Office**  
377 E. Chapman Ave., Suite 120, Placentia, CA 92670  
1-800-440-0597 • Fax: (714) 961-0978

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