

PVDF Tubing

FDA COMPLIANT

UV STABLE

LOW TOC

Kynar (PVDF) has several properties which make it ideal for a broad range of demanding applications. Kynar Tubing is **FDA compliant** and **meets USP Class VI** requirements. Also, it has low TOC, excellent chemical resistance to most strong chemicals, is UV stable, and is rated for high temperatures. **Kynar Tubing** is widely accepted in a range of industries and is known as an excellent and economical alternative to Teflon™ and other fluoropolymers. In many cases it has **superior mechanical properties** over more expensive fluoropolymers in its class.

Applications

- Pharmaceutical
- Chemical Process
- Semiconductor
- Wire insulation and jacketing
- Food Processing
- Pulp and paper

Benefits

- Low Cost
- Excellent Chemical Resistance
- Excellent Mechanical Properties
- Heat Weldable and Fusible
- UV Stable
- Non Hemolytic

Certifications

- U.S. Pharmacopoeia Class VI Certification
- Cytotoxicity criteria
- CFR Title 21 Section 177.2600
- Traceability: lot and batch
- Certification: lot and batch
- Current Good Manufacturing Practices (CGMP)
- Animal Derived Ingredient Free

Temperature Rating

- Upper service temperature: 275°F (135°C)

Sterilization

- Suited for Ethylene Oxide, gamma irradiation, and autoclave.

SIZING CHART

ID	OD	Wall	Bend Radius	Max WP @ 72 °F
Standard Wall				
1/16"	1/8"	1/32"	1/2"	451 PSI
1/8"	3/16"	1/32"	3/4"	168 PSI
3/16"	1/4"	1/32"	1"	126 PSI
1/4"	5/16"	1/32"	1-3/4"	101 PSI
5/16"	3/8"	1/32"	2-1/2"	84 PSI
1/8"	1/4"	1/16"	1/2"	260 PSI
1/4"	3/8"	1/16"	1"	174 PSI
3/8"	1/2"	1/16"	2"	130 PSI
1/2"	5/8"	1/16"	3"	104 PSI
5/8"	3/4"	1/16"	5"	87 PSI
7/8"	1"	1/16"	22"	65 PSI
0.170"	1/4"	0.040"	1"	155 PSI
5/32"	1/4"	0.047"	3/4"	177 PSI
Metric Sizes				
2MM	4MM	1MM	Contact Factory	Contact Factory
4MM	6MM	1MM	Contact Factory	Contact Factory
6MM	8MM	1MM	Contact Factory	Contact Factory
8MM	10MM	1MM	Contact Factory	Contact Factory
10MM	12MM	1MM	Contact Factory	Contact Factory

Properties

Thermal	Standard Conditions	Units	Value
Melting Temperature	D3418	°F (°C)	266 - 280 (130 - 138)
Tg (DMA)	@ 1 Hz	°F (°C)	-44 - -40 (-42 - -40)
Coefficient of Linear Thermal Expansion	D696	10E-5/°F	9.0 - 12.0
Thermal Conductivity	ASTMD433	BTU-in/hr-ft^2-°F	1.00 - 1.25
Specific Heat	DSC	BTU/lb-°F	0.28 - 0.36
Thermal Decomposition TGA	1% wt. loss/in air	°F (°C)	707 (375)
Thermal Decomposition TGA	1% wt. loss/in nitrogen	°F (°C)	770 (410)
Electrical			
Dielectric Strength 73°F	D149/73°F (23°C)	KV/Mil	1.1 - 1.3
Dielectric Constant 73°F	D150/100MHz - 100 Hz		3.8 - 12.1
Dissipation Factor 73°C	D150/100 Hz		0.02 - 0.24
Volume Resistivity	D257/DC 68°F (20°C)/65% R.H.	ohm-cm	2 x 10^14
Flame & Smoke			
Burning Rate	UL/Bulletin		94 V-0
Physical			
Refractive Index	D542/at Sodium D line 77°F (25°C)		1.41
Specific Gravity	D792/73°F (23°C)		1.78-1.80
Water Absorption	D570/68°F (20°C) Immersion/24 Hours	%	0.03 - 0.06
Mechanical			
Flexural Strength @ 5% Strain	D790/73°F (23°C)	psi (MPa)	2,000 - 3,500 (14-24)
	D790/73°F (23°C)	psi (MPa)	40,000 - 60,000
Flexural Modulus			(276 - 414)
Tensile Yield Elongation	D638/73°F (23°C)	%	15-25
Tensile Yield Strength	D638/73°F (23°C)	psi (MPa)	2,000 - 3,100 (14 - 21)
Tensile Break Elongation	D638/73°F (23°C)	%	200 - 400
Tensile Break Strength	D638/73°F (23°C)	psi (MPa)	2,900 - 4,000 (20 - 27)
Tensile Modulus	D638/73°F (23°C)	psi (MPa)	40,000 - 65,000 (276 - 448)
Compressive Strength	D638/73°F (23°C)	psi (MPa)	3,500 - 4,500 (24 - 31)
Deflection Temperature	D648/at 264 psi (1.82MPa)	°F (°C)	95 - 125 (35 - 51)
Deflection Temperature	D648/at 66 psi (0.45 MPa)	°F (°C)	120 - 150 (49 - 65)
Impact Strength Notched Izod	D256/73°F (23°C)	ft-lb/in	No Break
Impact Strength Unnotched Izod	D256/73°F (23°C)	ft-lb/in	No Break
Hardness	D2240/73°F (23°C)	Shore D	57 - 62
Tabor Abrasion	CS-17 1000g:pad	mg/1000 cycles	21 - 25
Coefficient of Friction-Static vs. Steel	ASTM D 1894 73°F (23°C)		0.55
Coefficient of Friction-Dynamic vs. Steel	ASTM D 1894 73°F (23°C)		0.54

This information provided by CLARIPURE® is deemed to be accurate; however, it should be used only as a general reference to aid in product selection. Please note: a material's properties may be affected greatly by temperature, operating pressure, concentration, and the presence of other chemicals. Ultimately, the consumer must determine the compatibility of any material based on tests done under their particular process conditions.



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