

# KYNAR® 740 - Stock Shapes

## Chemical Designation

PVDF (Polyvinylidene fluoride)

## Colour

white translucent

## Density

1.78 g/cm<sup>3</sup>

## Main features

- excellent chemical resistance
- inherent flame resistance
- high gamma radiation resistance
- good UV and weather resistance
- good mechanical properties
- low moisture absorption
- good machinability

## Target Industries

- chemical plant engineering
- process engineering
- medical technology
- cleanroom technology
- food processing

<i>Mechanical properties</i>	<i>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Modulus of elasticity (tensile test)	@ 73 °F	300,000 psi	ASTM D 638	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	8,000 psi	ASTM D 638	1)
Tensile strength at break	@ 73 °F	8,000 psi	ASTM D 638	
Elongation at break	@ 73 °F	35 %	ASTM D 638	
Flexural strength	@ 73 °F	13,000 psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	400,000 psi	ASTM D 790	
Compression strength	@ 73 °F, 1% strain	1,200 psi	ASTM D 695	
Compression strength	@ 73 °F, 10% strain	10,500 psi	ASTM D 695	
Compression modulus	@ 73 °F	160,000 psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.9 ft-lbs/in	ASTM D 256	
Rockwell hardness	M Scale	79	ASTM D 785	

<i>Thermal properties</i>	<i>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Melting temperature		342 °F	-	1) (1) per ASTM D3418
Deflection temperature	@264 psi	221-239 °F	ASTM D 648	2) (2) Injection molded samples
Deflection temperature	@ 66 psi	257-284 °F	ASTM D 648	3) (3) Injection molded samples
Service temperature	Long Term	300 °F	-	4) (4) Data obtained from public source
Thermal expansion (CLTE)		7.3*10 <sup>-5</sup> in/in/°F	ASTM D 696	5) (5) injection molded samples
Specific heat		0.28-0.36 BTU/lb-F°	*** new ***	6) (6) Injection molded data
Thermal conductivity		1.18-1.32 BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177	7) (7) injection molded data

<i>Electrical properties</i>	<i>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Volume resistivity	@ 73 °F, 65% RH	2*10 <sup>14</sup> Ω*cm	ASTM D 257	1) (1) Injection molded data
Dielectric strength		1700 V/mil	ASTM D 149	2) (2) Injection molded samples
Dissipation factor	@ 100 Hz, 73 °F	0.01--0.21	ASTM D 150	3) (3) injection molded data
Dielectric constant	@ 100 MHz, 73 °F	4.5	ASTM D 150	4) (4) injection molded data

<i>Other properties</i>	<i>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Moisture absorption	@ 24 hrs, 73 °F	0.02 %	ASTM D 570	(1) Thickness greater than 0.1mm Injection molded samples
Flammability (UL94)		V-0	-	1)

→ Resin specification:  
ASTM D3222-05 (Reapproved 2010) Type II  
Shapes specification:  
ASTM D 6713-01(Reapproved 2009) S-PVDF0110 X0000000

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# TECAFLON® PVDF - Stock Shapes

## Chemical Designation

PVDF (Polyvinylidene fluoride)

## Colour

white

## Density

1.78 g/cm<sup>3</sup>

## Main features

- excellent chemical resistance
- inherent flame resistance
- high gamma radiation resistance
- good UV and weather resistance
- good mechanical properties
- low moisture absorption
- good machinability

## Target Industries

- chemical plant engineering
- process engineering
- medical technology
- cleanroom technology
- food processing

<b>Mechanical properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Modulus of elasticity (tensile test)	@ 73 °F	350,000	psi	ASTM D 638	
Tensile strength at yield	@ 73 °F	8,100	psi	ASTM D 638	
Tensile strength at break	@ 73 °F	7,800	psi	ASTM D 638	
Elongation at break	@ 73 °F	35	%	ASTM D 638	
Flexural strength	@ 73 °F	14,700	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	410,000	psi	ASTM D 790	
Compression strength	@ 73 °F, 10% strain	11,600	psi	ASTM D 695	
Compression	@ 73 °F, 1% strain	1,200	psi	ASTM D 695	
Compression modulus	@ 73 °F	160,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.97	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F, M scale	79		ASTM D 785	

<b>Thermal properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Melting temperature		342	°F	-	1) (1) per ASTM D3418 (2) publicly sourced data
Deflection temperature	@264 psi	235	°F	ASTM D 648	2) (3) Injection molded samples
Deflection temperature	@ 66 psi	300	°F	ASTM D 648	3) (4) Data obtained from public source
Service temperature	Long Term	300	°F	-	4) (5) Data obtained from public source
Service temperature	short term	300	°F	-	5) (6) publicly sourced data
Thermal expansion (CLTE)		7.1*10 <sup>-5</sup>	in/in/°F	ASTM D 696	6) (7) publicly sourced data
Thermal conductivity		1.32	BTU-in/hr-ft <sup>2</sup> -°F	ASTM C 177	7)

<b>Electrical properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Volume resistivity	@ 73 °F	5*10 <sup>14</sup>	Ω*cm	ASTM D 257	1) (1) publicly sourced data
Dielectric strength		280	V/mil	ASTM D 149	2) (2) Injection molded samples
Dissipation factor	@ 60 Hz, 73 °F	0.06		ASTM D 150	3) (3) publicly sourced data
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	9		ASTM D 150	4) (4) publicly sourced data

<b>Other properties</b>	<b>condition</b>	<b>value</b>		<b>test method</b>	<b>comment</b>
Moisture absorption	@ 24 hrs, 73 °F	0.02	%	ASTM D 570	(1) Thickness greater than 0.1 mm Injection molded samples
Flammability (UL94)		V-0		-	1)

- Resin specification:  
ASTM D3222-05 (Reapproved 2010) Type II  
Shapes specification:  
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