

KYNAR® 740 PVDF natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PVDF (Polyvinylidene fluoride)

Colour

white translucent

Density

1.78 g/cm³

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

Mechanical properties	condition	value	unit	test method	comment
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 (tensile test)	@ 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, 10% strain	10,500	psi	ASTM D 695	
Compression strength	@ 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	1.9	ft-lbs/in	ASTM D 256	
Rockwell hardness	M Scale	79		ASTM D 785	
Thermal properties	condition	value	unit	test method	comment
Melting temperature		342	°F	-	1)
Deflection temperature	@264 psi	221-239	°F	ASTM D 648	2)
Deflection temperature	@ 66 psi	257-284	°F	ASTM D 648	3)
Service temperature	Long Term	300	°F	-	4)
Thermal expansion (CLTE)		7.3*10 ⁻⁵	in/in/°F	ASTM D 696	5)
Specific heat		0.28-0.36	BTU/lb-F°	*** new ***	6)
Thermal conductivity		1.18-1.32	BTU-in/hr-ft ² -°F	ASTM C 177	7)
Electrical properties	condition	value	unit	test method	comment
volume resistance	@ 73 °F, 65% RH	2*10 ¹⁴	Ω*cm	ASTM D 257	1)
Dielectric strength		1700	V/mil	ASTM D 149	2)
Dissipation factor	@ 100 Hz, 73 °F	0.01--0.21		ASTM D 150	3)
Dielectric constant	@ 100 MHz, 73 °F	4.5		ASTM D 150	4)
Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.02	%	ASTM D 570	(1) Thickness greater tan 0.1mm Injection molded samples
Flammability (UL94)		V0		-	1)

→ Resin specification:
ASTM D3222-05 (Reapproved 2015), I2
Shapes specification:
ASTM D 6713-01(Reapproved 2009) S-PVDF0110 X0000000

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