

TECAFLON® PVDF - Stock Shapes

Chemical Designation

PVDF (Polyvinylidene fluoride)

Colour

white

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
- food processing

Mechanical properties	condition	value	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	350,000 psi	ASTM D 638	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	7,250 psi	ASTM D 638	(2) @10 % strain
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	10,750 psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	310,000 psi	ASTM D 790	
Compression strength	@ 73 °F	11,600 psi	ASTM D 695	2)
Impact strength (Izod)	@ 73 °F	3.0 ft-lbs/in	ASTM D 256	
Rockwell hardness	R Scale	100	ASTM D 785	
Thermal properties	condition	value	test method	comment
Melting temperature		342 °F	-	1) (1) per ASTM D3418
Deflection temperature	@264 psi	235 °F	ASTM D 648	(2) Injection molded samples
Deflection temperature	@ 66 psi	300 °F	ASTM D 648	(3) Data obtained from public source
Service temperature	short term	300 °F	-	(4) Data obtained from public source
Service temperature	Long Term	300 °F	-	
Thermal expansion (CLTE)		7.1*10 ⁻⁵ in/in/°F	ASTM D 696	
Thermal conductivity		1.32 BTU-in/hr-ft ² -°F	ASTM C 177	
Electrical properties	condition	value	test method	comment
Volume resistivity	@ 73 °F	5*10 ¹⁴ Ω*cm	ASTM D 257	(1) Injection molded samples
Dielectric strength		280 V/mil	ASTM D 149	1)
Dissipation factor	@ 60 Hz, 73 °F	0.06	ASTM D 150	
Dielectric constant	@ 60 Hz, 73 °F, 50% RH	9	ASTM D 150	
Other properties	condition	value	test method	comment
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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