



PVDF — Material Datasheet

Semi-crystalline fluoropolymer offering excellent chemical resistance, inherent flame retardancy, and stable mechanical and electrical performance.

Physical

Property	Unit	Value
Density	g/cm ³	1.78
Water absorption (24 h, 23 °C)	%	0.03

Mechanical

Property	Unit	Value
Tensile strength (yield)	MPa	50
Tensile modulus	GPa	2.2
Elongation at break	%	30
Notched Charpy impact	kJ/m ²	10
Hardness (Rockwell M)	—	M78

Thermal

Property	Unit	Value
Melting temperature	°C	175
Max continuous service temperature	°C	140
Thermal conductivity	W/m·K	0.20
Coefficient of linear thermal expansion	10 ⁻⁶ /K	140

Electrical

Property	Unit	Value
Dielectric strength	kV/mm	18
Volume resistivity	Ω·cm	≥1×10 ¹⁴
Relative permittivity (1 MHz)	—	6.0
Dissipation factor (1 MHz)	—	0.03

Flammability & Environment

Property	Unit	Value
Flammability (UL 94)	—	V-0 (typical 3 mm)
Limiting Oxygen Index (LOI)	%	44
UV/weathering resistance	—	Excellent
Chemical resistance	—	Excellent to acids, bases, halogenated solvents; avoid HF/strong hot alkalis