

Starke™ PVDF Pipe Technical Data Sheet

Material description:

PVDF probably is the most chemically resistant thermoplastic known in the world today, standing up to -30°C ~+150°C, which has a fairly good dimensional stability and good tribological characteristics. PVDF is a flame-retardant, self-extinguishing plastic with high density and excellent strength. It is inherent in the minimum impact strength at low temperatures.

Material Performance:

- low thermal conductivity
- high chemical corrosion resistance
- heat resistance
- mechanical strength and toughness
- resistant to most chemicals and solvents
- low permeability to most gases and liquids
- withstands exposure to harsh thermal and chemical conditions
- unaffected by long-term exposure to ultraviolet radiation

Physical properties	Test Method	Value	Unit
Relative Density	ASTM D792	1.75–1.80	g/cm3
Mechanical Properties	Test Method	Value	Unit
Tensile stress	ASTM D638	23–35	MPa
Elongation at break	ASTM D638	-	%
Shore Hardness	ASTM D2240	72-78	/
Thermal Properties	Test Method	Value	Unit
Glass Transition Temperature	ASTM D4065	-40	°C
Melting Point	ASTM D3418	168–172	°C
Vicat Softening Point	ASTM D1525	90–125	°C
Electric Properties	Test Method	Value	Unit
Volume resistivity	ASTM D257	>1.0E+14	Ω·m
Permittivity (10 ⁶ Hz)	ASTM D150	7.0–10.0	—
Dielectric strength	ASTM D149	20–25	kV/mm

These technical data have been determined as average values by our suppliers from many individual measurements. In all measurements, the test specimens were tested in the dry state. We pass on the data with reservation. The table does not claim to be complete or correct. Material technology is subject to constant further development. No rights or guarantees can be derived from it. Own tests are necessary because the environmental and operating conditions (humidity, temperature, mechanical forces, radiation and chemicals, etc.) set limits in the application.

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