

TECAFLON PVDF natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PVDF (Polyvinylidene fluoride)

Colour

white opaque

Density

1.78 g/cm³

Main features

- very good chemical resistance
- inherent flame retardant
- continuous service temperature up to 150 °C
- good slide and wear properties
- very good weldable
- very good electrical insulation
- very good UV and weather resistance

Target Industries

- chemical technology
- electronics
- energy industry
- food technology
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	62	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen.
Modulus of elasticity (tensile test)	1mm/min	2200	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	62	MPa	DIN EN ISO 527-2	
Elongation at yield (tensile test)	50mm/min	8	%	DIN EN ISO 527-2	
Elongation at break (tensile test)	50mm/min	17	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	77	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	2100	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	16/28/59	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	1900	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	150	kJ/m ²	DIN EN ISO 179-1eU	5)
Shore hardness	D	80		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		-40	°C	DIN EN ISO 11357	1)
Melting temperature		171	°C	DIN EN ISO 11357	
Service temperature	short term	150	°C		2)
Service temperature	long term	140	°C	-	
Thermal expansion (CLTE)	23-60°C, long.	16	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	18	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.25	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹⁴	Ω	-	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	<0.01 / <0.01	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		+		-	2)
Resistance to weathering		+		-	
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	3)

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