

## TECAFLON PVDF ELS black - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PVDF (Polyvinylidene fluoride)

### Colour

black opaque

### Density

1.78 g/cm<sup>3</sup>

### Fillers

conductive carbon black

### Main features

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

### Target Industries

- chemical technology
- electronics
- energy industry
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	3100	MPa	DIN EN ISO 527-2	1) (1) For tensile test: specimen type 1b
Tensile strength at yield	50mm/min	55	MPa	DIN EN ISO 527-2	(2) For Charpy test: support span 64mm, norm specimen.
Elongation at yield (tensile test)	50mm/min	4	%	DIN EN ISO 527-1	(3) Specimen in 4mm thickness
Elongation at break (tensile test)	50mm/min	8	%	DIN EN ISO 527-2	
Impact strength (Charpy)	max. 7,5J	67	kJ/m <sup>2</sup>	DIN EN ISO 179-1	2)
Ball indentation hardness		162	MPa	ISO 2039-1	3)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		-40	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		177	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	long term	150	°C	-	Individual testing regarding application conditions is mandatory.
Service temperature	short term	150	°C	-	2)
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 <sup>-2</sup> - 10 <sup>5</sup>	Ω	DIN EN 61340-2-3	
Other properties	parameter	value	unit	norm	comment
Resistance to hot water/ bases		+	-	-	1) (1) + good resistance
Resistance to weathering		+	-	-	2) (2) + good resistance

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on extruded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at [www.ensingerplastics.com](http://www.ensingerplastics.com). Technical changes reserved.