PVDF - Polyvinylidene fluoride

Other material names PVDF: SYMALIT PVDF 1000 natural
Material group: Special plastics

PVDF is a highly crystalline unreinforced fluoropolymer combining good mechanical, thermal and electrical properties with excellent chemical resistance. Its property profile makes PVDF a versatile engineering material, especially suitable for the manufacture of components for the petrochemical, chemical, metallurgical, pharmaceutical, food, paper, textile and nuclear industries.

Color of material:

Natur

Typical applications:

- Parts of valves, fittings and pumps.
- High-stressed sealants in rubber processing technology.
- Sealants for chemically aggressive environments.

The material is used in:

Food industry
Electrotechnical industry

Features:

- High max. allowable service temperature in air (150°C continuously)
- Good mechanical strength, stiffness and creep resistance (better than other fluoropolymers)
- Excellent chemical and hydrolysis resistance
- High toughness, also at low temperatures
- Good sliding properties and wear resistance
- Good dimensional stability
- Physiologically inert (suitable for food contact)
- Good electrical insulating properties
- Outstanding UV and weather resistance
- Inherent low flammability
- Fairly good resistance against high energy radiation (much better than other fluoropolymers)

Material availability: Production only on request

Material properties table

Specific weight	1.79 g/cm³
Yield strength	50 N/mm²
Tensile strength	75 N/mm²
Allowable mean pressure deformation 1%	17.00 N/mm²
Allowable mean pressure deformation 2%	32.00 N/mm²
Tensibility	20 %
Tensile modulus	2 300 N/mm²
Impact toughness	bez zlomu
Notched toughness	>10 kJ/m²
Ball hardness	110 N/mm²
Friction coefficient	0.35
Antistatic material	No
Permittivity	7.40

Electrical strength	11 kV/mm
Specific internal resistance	10^(15) Ω
Specific surface resistance	10^(16) Ω.cm
Melting point	175 °C
Thermal conductivity	0.19 W/(K.m)
Permanent use temperature	-20 ; 140 °C
Transient temperature of use	-40 ; 160 °C
Absorbability	0.05 %
Water absorption	0.05 %
Resistance - oils	resistant
Acid resistance	resistant
Durability - alcali	resistant
Food contact	No

Engineering plastics are supplied in the form of bars, plates, strips, tubes and sheets. From the semi-finished products the company TechPlasty has regularly in stock, we also supply blanks.

All standard and special materials are designed to meet your specific requirements. Their mechanical, thermal, and electrical properties and chemical resistance satisfy the most demanding requirements and this allows them to work even in the most difficult conditions. If you need advice when choosing the appropriate material for your application, please contact us. We'll gladly advise you. You can utilize the long-term experience of our technical advisors free-of- charge, who can visit you right in your operation and solve your requirements for engineering plastics directly at the site of their usage.

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