



# BioSafe PVDF

High-Purity Polyvinylidene Fluoride  
Membrane Filter Cartridges



Sterilizing Grade



Extreme Chemical  
Resistance



100% Factory  
Integrity Tested

Available in Hydrophobic & Hydrophilic Matrix • Pure Polypropylene Structural Hardware

ENGINEERED FOR PURITY,  
**BUILT FOR PERFORMANCE.**

PVDF

FILTRATION  
EXCELLENCE

$\mu$ m  
RATING

The BioSafe PVDF Series membrane filter cartridges are engineered to withstand highly aggressive chemical environments where standard polymeric membranes fail. By utilizing premium pleated Polyvinylidene Fluoride (PVDF) media, these elements deliver absolute filtration precision, low pressure drops, and exceptional structural longevity across a diverse range of corrosive process fluids and high-temperature applications.

Advanced Engineering Advantages

01 Dual Matrix Engineering

**BSP-VDF (Hydrophobic):** Perfect for technical gases, tank vents, and aggressive organic solvent purification.

**BSP-VDFH (Hydrophilic):** Chemically modified for immediate wetting in polar aqueous solutions, cutting operational down-time and pre-wetting costs.

02 Non-Contact Thermal Fusion Bonding

Mikropore integrates proprietary non-contact thermal fusion welding to flawlessly bond the PVDF membrane pack with the polypropylene support cage, core, and end caps. This eliminates physical friction variables and contact contamination risks.

03 Inert Chemical Profile & Low Binding

Formulated entirely without binding resins, adhesives, or glues. The pure PVDF media offers ultra-low protein binding properties, ensuring minimal product loss in critical bioprocess workflows.

04 100% Factory Quality Assurance

Every element undergoes non-destructive integrity testing prior to shipment, guaranteeing certified particle and microbiological retention under rigorous validation standards.



|             |                                         |
|-------------|-----------------------------------------|
| Membrane    | PVDF Hydrophobic / Hydrophilic          |
| Retention   | 0.1 / 0.22 / 0.45 / 0.65 / 1.0 / 5.0 µm |
| Temperature | Up to 82°C (180°F)                      |
| Hardware    | 100% Pure Polypropylene                 |

# APPLICATIONS & SPECIFICATIONS

## Typical Harsh-Environment Applications

### 01 Chemical Processing

Clarification and purification of strong acids, alkalis, aggressive chemical washes, and corrosive plating baths.

### 02 Pharmaceuticals & Biotech

Sterilizing filtration of biological fluids, active pharmaceutical ingredients (APIs), and aggressive solvents.

### 03 Industrial Utilities

High-purity solvents, DI water loops, and chemical delivery systems in electronics and manufacturing plants.

## Technical Working Characteristics

Maximum Service Temperature

82 °C

Maximum Forward Differential Pressure

0.40 MPa @ 21 °C (58 psi)

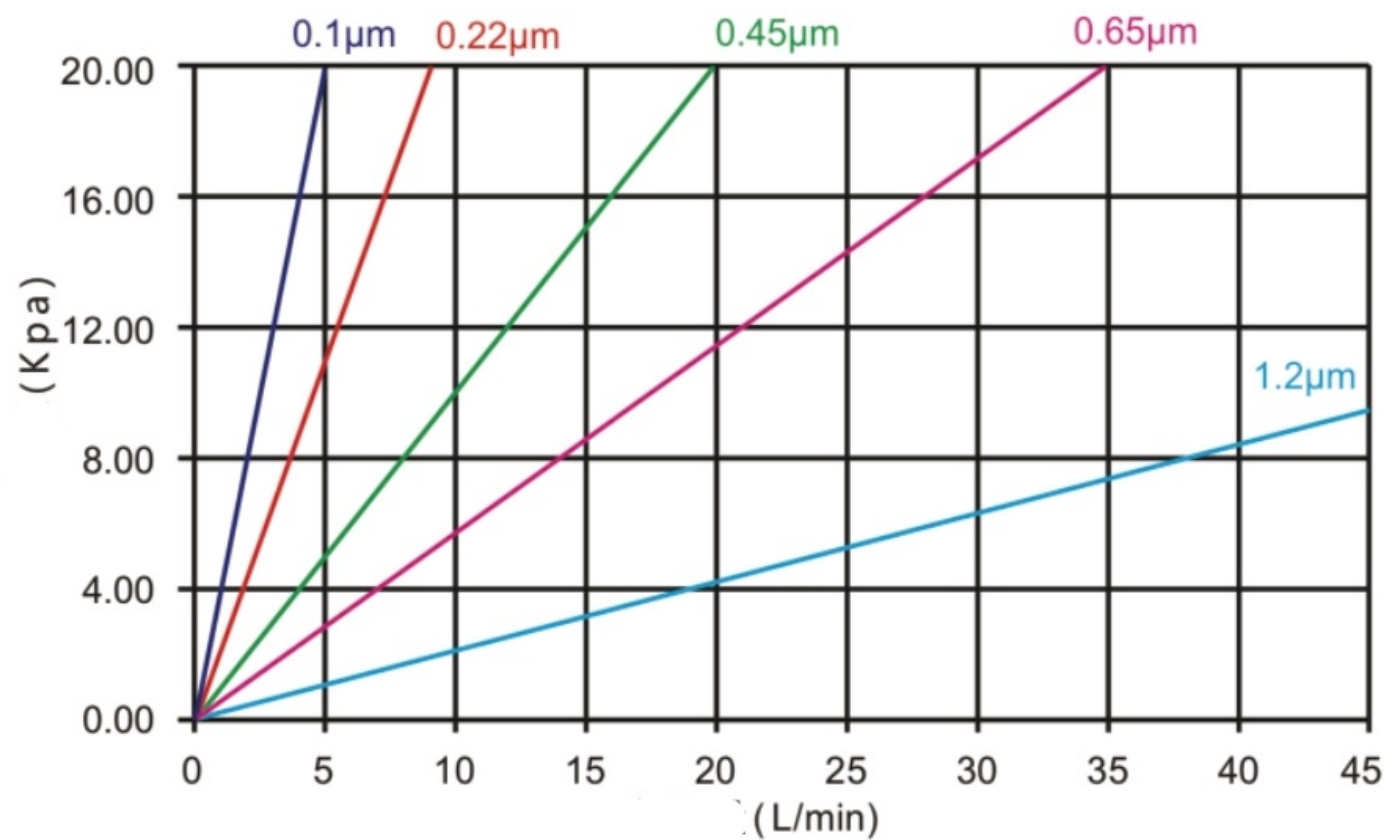
0.24 MPa @ 80 °C (35 psi)

Recommended Change-Out Differential Pressure

0.24 MPa (35 psi)

# PERFORMANCE CURVES & SELECTION CHART

Flow Rate vs. Differential Pressure (Per 10" Element with Water at 25°C)



The hydro-dynamically balanced pleat distribution of the PVDF media provides a highly stable flow path with exceptionally low clean differential pressure.

## Part Number / Selection Configurator

Build your custom Mikropore absolute part number using the matrix below:

| Series                    | Micron Rating | Length   | End-Cap Configuration  | Seal Material          |
|---------------------------|---------------|----------|------------------------|------------------------|
| BSP-VDF<br>(Hydrophobic)  | 010 = 0.1 µm  | 05 = 5"  | DOE = Double Open End  | S = Silicone           |
|                           | 022 = 0.22 µm | 10 = 10" | C2 = 226 / Flat Closed | E = EPDM               |
| BSP-VDFH<br>(Hydrophilic) | 045 = 0.45 µm | 20 = 20" | C3 = 222 / Flat Closed | V = Viton              |
|                           | 065 = 0.65 µm | 30 = 30" | C7 = 226 / Fin End     | N = NBR                |
|                           | 100 = 1.0 µm  | 40 = 40" | C8 = 222 / Fin End     | T = Encapsulated Viton |
|                           | 500 = 50 µm   |          |                        |                        |

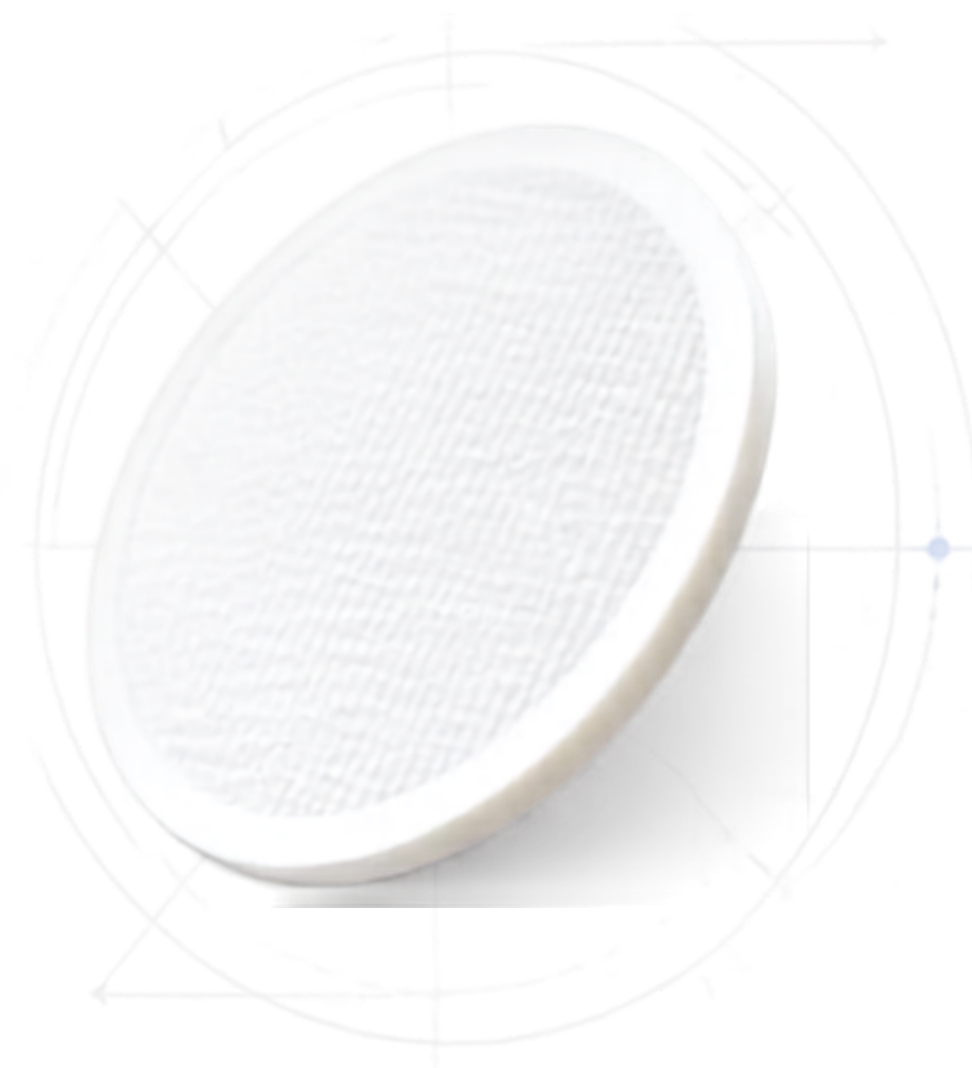
**Ordering Example:**  
BSP-VDFH-022-10-C7-V (BioSafe PVDF Hydrophilic, 0.22 µm rating, 10-inch length, 226/Fin adapter, Viton seals).



**Regulatory Compliance:** Component materials meet FDA requirements for food and beverage contact. Complies with USP Class VI Biological Test standards for plastics.



For verified chemical compatibility charts, specialized extraction data, or custom housing integration, please contact our technical application desk.



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FILTRATION SOLUTIONS



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