



Hydrophilic / Hydrophobic PVDF Membrane

Polyvinylidene Fluoride (PVDF) membrane is a naturally hydrophobic, unsupported membrane, it has excellent properties including high thermal stability, excellent mechanical strength and chemical resistance to organic solvents, corrosion, oxidation and withstand solutions of pH 2-10.

Polyvinylidene Fluoride (PVDF) filter is available in Hydrophobic version or Hydrophilic version (after hydrophilic treatment). The PVDF membrane is produced with high porosity and optimized porous structure, it is an essential membrane in various industries, for example Medical, Laboratory, Food & Beverage, Pharmaceutical, etc.

The Hydrophobic PVDF membrane with excellent hydrophobic ability, fast air flow rate and professional general /sterile filtration capability, easy for assembling as unnecessary to distinguish the front and back side, can be ideally used as a PVDF venting membrane filter or air filtration/sterilization for medical devices or diagnosis assay.

Also hydrophobic PVDF membrane can be used as a carrier media of biosensors or a transfer membrane for protein blotting applications (Western Blot / ELISPOT). The optimized porous structure and high binding capacity for protein of hydrophobic PVDF membrane makes it easy to access bound proteins and remove unbound probes. The low background for fluorescent blots of PVDF membrane significantly increases signal-to-noise ratios for high sensitivity in quantitative, multiplexing applications.

The Hydrophilic PVDF membrane with very low protein binding and high flow rate features, is ideal for clarification, pre-filtration and sterile filtration of fluids such as water, diagnostic reagent, buffer, cell culture medium, ophthalmic solution, blood products/serum, etc, offering efficient bacterial and particulate retention.

Also the hydrophilic version PVDF membrane are popular in the usage of syringe filter, funnel filter, vacuum filter and sterility testing devices applications for particles removal, sample preparation or general filtration,etc.

S58 Filtration Unit



Sterility Testing



Ascle U Filtration Funnel



Syringe Filter



Disposable Vacuum Filter



Meet ATCC*19146) Retention Test. 10^7 cfu/ cm *Brevundimonas diminuta* (ATCC*19146)
"Non-fiber releasing" as defined by FDA 21 CFR 210.3(b)(6) Filter Standards
Certified Biological Safety (USP Class VI)
Outstanding Flow Rates & Throughput
Low Extractables & Background
Broad Chemical Compatibility
Lot-to-lot Consistency

Typical Applications

Hydrophobic PVDF Membrane

- Ventilation Filter
- Sterile-grade Filtration for Compressed Air, Oxygen, Nitrogen. Etc

- Binding Assay
- Western Blotting Membrane
- ELISPOT Test
- Immunoblotting Test
- Protein Sequencing
- Biosensors

Hydrophilic PVDF Membrane

Widely Used for Below Filtration as PVDF Filters (Membrane Filters, Capsule Filter, Cartridge Filter, Syringe Filter, Funnel Filter, etc)

- Particulate Removal
- Clarifying Filtration
- General Filtration
- Analytical Sample Preparation, μ HPLC
- Diagnostic Reagent Filtration and Sterilization
- Media filtration
- Low Protein Adsorption Filtration
- Endotoxin Adsorption (Positively Charged)

Membrane Formats

- Roll Type
- Sheet Type
- Disc Type
- Adhesive Backing Type
- Customization

General Specifications

| | |
|----------------|-------|
| Color | White |
| Surface | Plain |

| | |
|------------------------------|---|
| Pore Size | 0.1 / 0.22 / 0.3 / 0.45 / 0.65 / 1.0 / 2.0 μm |
| Wettability | Hydrophilic or Hydrophobic |
| Sterilization | Autoclave, Ethylene Oxide, E-Beam, Gamma Irradiation |
| Sealing Compatibility | Ultrasonic, Heat, Mechanical, RF Welding, Inserting Molding |

Specifications

| Detailed Description | Pore Size | Thickness | Water Flow Rate @ -30kPa *50ml *12.68cm ² | Bubble Point (Water) | Endotoxin |
|-------------------------|--------------------|-------------------|--|-------------------------|------------------------|
| Hydrophilic PVDF | 0.1 μm | 125 μm | 85s | 550 kPa | $\leq 0.5\text{EU/ml}$ |
| | 0.22 μm | 125 μm | 35s | 390 kPa | $\leq 0.5\text{EU/ml}$ |
| | 0.45 μm | 125 μm | 9s | 230 kPa | $\leq 0.5\text{EU/ml}$ |
| | 0.65 μm | 125 μm | 6s | 180 kPa | $\leq 0.5\text{EU/ml}$ |
| | 1.0 μm | 125 μm | 12s (-5 kPa) | 110 kPa | $\leq 0.5\text{EU/ml}$ |
| | 2.0 μm | 125 μm | 6s (-5 kPa) | 75 kPa | $\leq 0.5\text{EU/ml}$ |
| Detailed Description | Pore Size | Thickness | Air Flow Rate @ -100ml * 1in ² * 4.88 in. water | WEP (60s) | Endotoxin |
| Hydrophobic PVDF | 0.22 μm | 160 μm | 40s | 260 kPa | $\leq 0.5\text{EU/ml}$ |
| | 0.45 μm | 115 μm | 11s | 140 kPa | $\leq 0.5\text{EU/ml}$ |
| | 1.0 μm | 110 μm | 4s | 70 kPa | $\leq 0.5\text{EU/ml}$ |

Cobetter Hydrophilic PVDF Membrane Shows Extremely Low Protein Binding

Test Method:

1. Put the membrane samples and 1mg/ml BSA solution together into the bottle, and the bottle will be put on the laboratory shaker for 1 hour vibration to make sure the protein is fully absorbed.
2. Use an ultraviolet spectrophotometer to measure the protein value of the BSA solution before and

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after the membrane adsorption, then calculate the protein bound of each membrane.

