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BioSafe PES

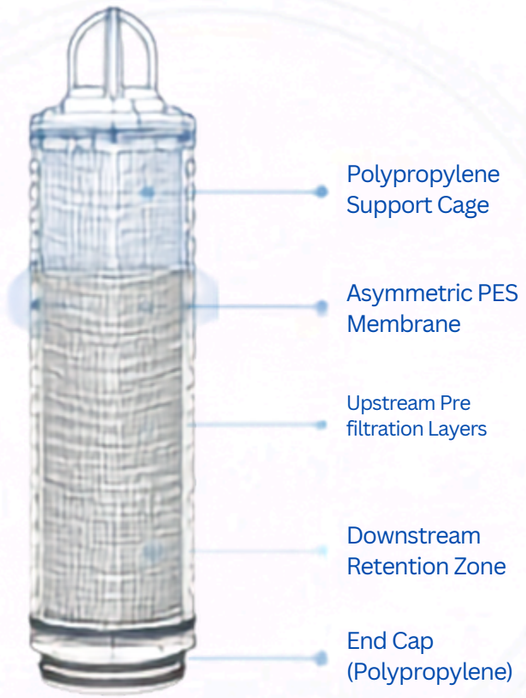
High-Purity Hydrophilic Asymmetric Membrane Filter Cartridges

Sterilizing Grade • 99.99% Microbiological Retention • 100% Integrity Tested Matrix

Advanced Bio-Process Clarification • Pure Polypropylene Structural Hardware

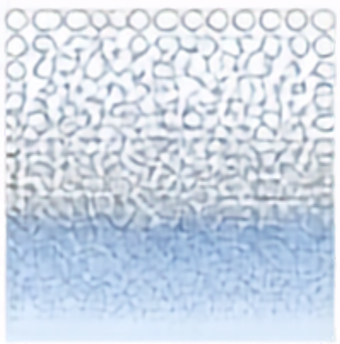
Validated Biological Safety for Sterile Liquid Processes

The BioSafe PES Series membrane filter cartridges are engineered for critical production environments. Their inherently hydrophilic, asymmetric PES membranes avoid pre-wetting in aqueous solutions and feature a graded pore structure that delivers high throughput with effective particle and bacterial retention.



ENGINEERING EXCELLENCE BY DESIGN

1



Asymmetric Pore Geometry

The BioSafe PES membrane features a smooth density transition from upstream pre filtration layers to downstream high-precision retention zones. This asymmetric structure doubles the dirt-holding capacity compared to symmetrical membranes.

2

Non-Contact Thermal Fusion Bonding

Mikropore's non-contact thermal fusion bonding process securely connects the PES membrane pack with the polypropylene support cage and end caps. This eliminates mechanical friction variables and contact contamination for a more reliable and consistent assembly.

3

Zero Leaching Assurance

BioSafe PES cartridges are constructed free from binding resins, adhesives, glues, and chemical surfactants. The inert material composition avoids extractables and supports critical chemical compatibility.

4

100% Factory Integrity Tested

Every BioSafe PES filter element undergoes non-destructive integrity testing—such as Bubble Point or Diffusion Flow verification—before packaging to ensure consistent performance and field reliability.

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Typical High-Sanitation Applications

1 APPLICATIONS

Biopharmaceuticals:

Sterilizing filtration of diagnostics, cell culture media, serum products, ophthalmics, and vaccines.

Food & Beverage:

Microbiological stability and cold sterilization of draft beer, premium wines, bottled spring water, juices, and liquid ingredients.

Ultrapure Utilities:

Final filtration loops for deionized (DI) water systems and process chemical purification in semiconductor plants.

2 TECHNICAL WORKING CHARACTERISTICS

Maximum Operating Temperature:

82 °C

Maximum Forward Differential Pressure:

0.38 MPa @ 21 °C (55 psi)

0.24 MPa @ 80 °C (35 psi)

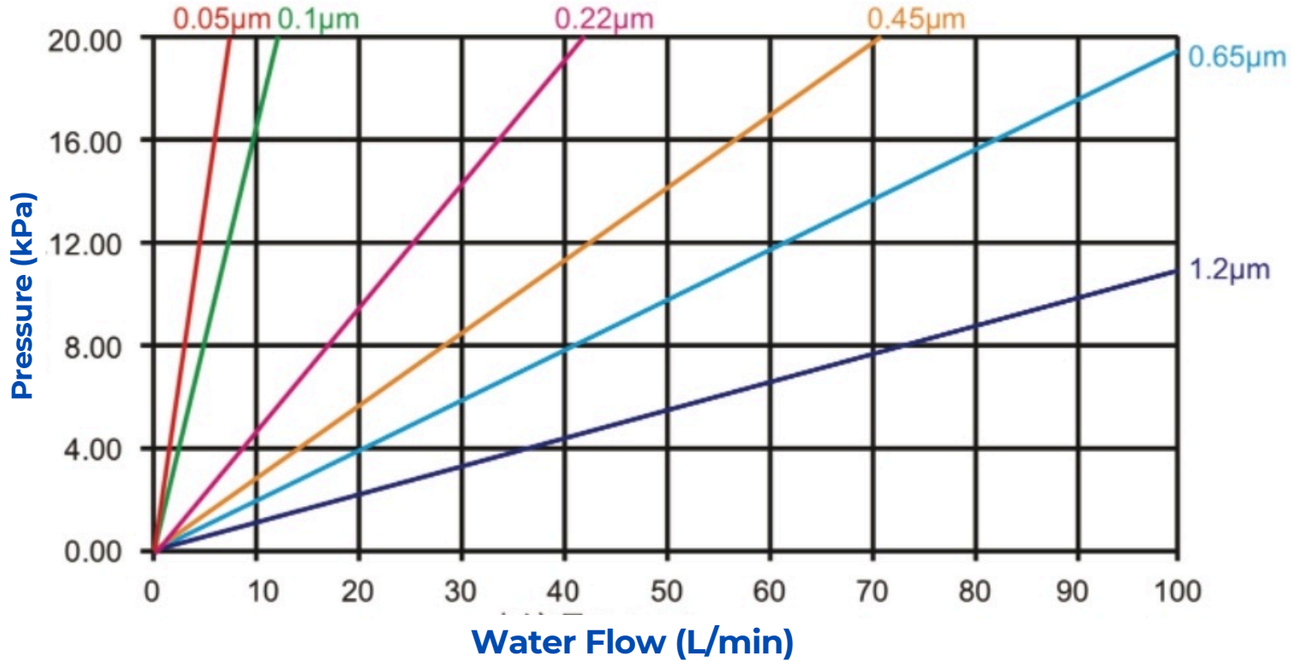
Recommended Change-Out Differential Pressure:

0.24 MPa (35 psi)

Flow Rate vs. Differential Pressure

Per 10· Element with Water at 25·C

The linear performance curves demonstrate the exceptional porosity and hydro-dynamically balanced fluid flow of the BioSafe PES series across all absolute-rated micron sizes.



Part Number / Selection Configurator

Series	Micron Rating	Length	End-Cap Configuration	Seal Material
BSP-PES (BioSafe PES)	**005** 0.05 µm **010** 0.1 µm **022** 0.22 µm **045** 0.45 µm **065** 0.65 µm **120** 1.2 µm	**05** 5" **10** 10" **20** 20" **30** 30" **40** 40"	**DOE** Double Open End **C2** 226 / Flat Closed **C3** 222 / Flat Closed **C7** 226 / Fin End **C8** 222 / Fin End	**S = Silicone** **V = Viton** **E = EPDM** **N = NBR** **T = FEP Encapsulated Viton**

REGULATORY COMPLIANCE

Meets USP Class VI Biological Test standards for plastics. All component materials meet FDA requirements for contact with food and beverages.

TECHNICAL SUPPORT

For validation documentation, bacterial challenge test results, or hardware sizing support, please connect with our bioprocess application engineers.

COMMERCIAL CONTACTS

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