

Polyethersulfone (PES) membrane filter- 0.22µm

1. Product Specification

Cat.No.	ME10201
Material	PES
Pore Size	0.22 µm
Diameter	293 mm
Bacterial Retention	>7 log reduction value (<i>Brevundimonas diminuta</i>)
Water Bubble Point	0.40–0.57 MPa
Water Flow Rate (at 10 psi)	20–40 mL/min/cm ²
Sterile	Non-Sterile
Wettability	Hydrophilic
Surface	White
Max Operating Temperature	90 °C
Packing	25 Pieces/Pack

2. Product Description

PES membranes have excellent hydrophilicity and flow rate, and are therefore also known as hydrophilic PES membranes. PES microfiltration membranes are absolute-rated filters that retain all particles larger than the membrane's pore size. They are stable in alkaline pH, have good chemical stability and inertness, high drug compatibility, and thermal stability. The entire membrane can be sterilized at high temperatures without compromising integrity. During sterilization, it maintains strong anti-shrinkage performance, preventing membrane tearing, reduced flow rate, and decreased total filtration volume. Widely used in filtration and clarification in the food and pharmaceutical industries.

Medino PES membranes are manufactured using a unique hybrid process combining dry and wet methods. They offer high flow rate (high throughput), do not adsorb proteins or extractables during sterilization, and do not contaminate samples. Available pore sizes: 0.02 µm / 0.03 µm / 0.05 µm / 0.1 µm / 0.22 µm / 0.45 µm / 0.65 µm / 0.8 µm / 1.0 µm / 1.2 µm / 5.0 µm. The highly asymmetric pore structure and high porosity deliver greater water flux compared to other membranes with the same pore size. The low protein-binding property of PES membranes makes them ideal for biological sample preparation.

3. Product Features

- 3.1 Effective pore size range: 0.02–5 µm; membrane structure is a star-shaped network with uniform pore size distribution
- 3.2 High filtration precision; pore size is approximately normal distribution and relatively uniform
- 3.3 High flow rate, high strength, and fast filtration speed
- 3.4 Low extractables and low protein adsorption
- 3.5 Thin membrane thickness with low adsorption
- 3.6 No material shedding, avoiding secondary contamination
- 3.7 Excellent resistance to high temperatures and strong acids/alkalis
- 3.8 Particle retention rate: >99.99%

4. Product Assurance

- 4.1. Complies with FDA Biocompatibility Standards
- 4.2. Particle Retention Efficiency: >99.99%

5. Typical Applications

- 5.1. General filtration
- 5.2. Sterile filtration
- 5.3. Intravenous injection
- 5.4. Biopharmaceutical manufacturing
- 5.5. Bacterial separation

Table. Application Guide

Application	Performance Index	Available Pore Size
Clarification and visible particle removal	Visual clarity	3–5 µm
Removal of macromolecules/particles	Removal of yeast and mold	0.6 µm
Bioburden reduction	Pyrogen control	0.45 µm
Bacterial retention	Bacteria removal	0.22 µm
Removal of small organic molecules	Endotoxin removal	0.1 µm