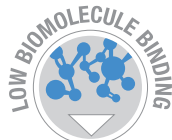


Hydrophilic Polyethersulfone Membranes for General Filtration Applications



Polyethersulfone (PES) membranes for aqueous solutions provide removal of fine particles, bacteria, and fungi making it a versatile membrane for applications such as sample preparation, sterile filtration and infusion therapy. PES are inherently hydrophilic membranes that wet out quickly and completely resulting in fast filtration with superior flow rates and high throughputs. PES membranes are also extremely low protein binding minimizing the likelihood of target analyte binding. They are also compatible with EtO, gamma irradiation, and autoclave methods of sterilization.

Sample Preparation

The low protein binding nature of these polyethersulfone membranes make them well suited for biological sample preparation. Available in a variety of pore sizes, the membranes can be used for coarse particulate removal in prefiltration applications or as a fine final filter for clarification. An excellent choice for bead-based, multi-plexed assays, the PES membrane yields high microsphere recovery and reduces the incidence of false positives in serological assays.

Sterile Filtration

Available in 0.1 and 0.2 μm pore sizes, these polyethersulfone membrane grades provide sterilization of buffers, culture media, additives, and pharmaceutical filtration. If mycoplasma contamination is a concern, the 0.1 μm PES membrane provides assurance that critical samples will not be contaminated.

Healthcare

For infusion therapy, the inherent hydrophilicity of the membrane allows fast priming of a finished device and provides a barrier to air passing through the wetted membrane. While wetting out quickly, PES membrane provides high throughput over time extending the life of the finished product. The membrane has a uniform pore structure for application requirements of sterile fluids and particulate retention. Our polyethersulfone membranes also comply with United States Pharmacopeia (USP) Biological Reactivity Test *In Vivo* <88> for biosafety, cytotoxicity, and hemolysis testing.

Microbial Analysis

Available in a modified black format, these PES membrane grades provide a contrasting membrane for microbiological and particulate analysis. The dark background provides excellent contrast for counting opaque colonies in labs and monitoring light-colored particulate in process fluids. Black PES membrane is an excellent medium for the isolation and enumeration of yeast or mold colonies.

Applications

- General/sterile filtration
- Bead-based assays
- Infusion therapy
- Pharmaceutical filtration
- Bacterial isolation/enumeration

Sealing

- Mechanical
- Heat
- Ultrasonic
- RF welding
- Insert molding

Product Information

Specification

Hydrophilic Polyethersulfone

Typical Membrane Characteristics

Base Material	Pore Size (µm)	Thickness	
		mils	µm
Unsupported polyethersulfone (Supor)	0.1	4.0-6.2	101.6-157.5
	0.2	5.1-6.4	129.5-162.6
	0.45	4.5-6.5	114.3-165.1
	0.8	4.5-6.5	114.3-165.1
	1.2	4.0-6.0	101.6-152.4
	5.0	3.5-7.0	88.9-177.8

Typical Performance Characteristics

Water Bubble Point		Water Flow (mL/min/ cm ² @ 0.7 bar, 10 psi)
psi	bar	
≥38.0*	≥2.62*	≥2.8
≥53.0	≥3.65	≥19.3
≥36.0	≥2.48	≥38.0
≥15.0	≥1.03	≥80.0
≥10.0	≥0.7	≥215.0
≥2.0	≥0.14	≥423.0

* 60% IPA/40% water

Black Polyethersulfone

Typical Membrane Characteristics

Base Material	Pore Size (µm)	Thickness	
		mils	µm
Unsupported polyethersulfone (Supor)	0.45	3.3-6.9	83.8-175.3
	0.8	4.1-7.6	104.1-193.0

Typical Performance Characteristics

Water Bubble Point		Water Flow (mL/min/ cm ² @ 0.7 bar, 10 psi)	Yeast Recovery (<i>S.cerevisiae</i>)
psi	bar		
≥23.5	≥1.62	≥34.5	≥85%
≥13.9	≥0.96	≥102.8	



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