

BorsoPES–Biological–AP

PFAS-Free Hydrophobic PES Membrane Filter



Product Name

PFAS-Free Hydrophobic PES Membrane Filter.

Description

The PFAS-FreeHydrophobic PES Membrane Filter is an innovative solution designed for gas sterilization applications across various industries. This filter is made of PFAS-free hydrophobic polyethersulfone (PES), ensuring environmental safety while providing high performance in chemical and thermal resistance. It meets strict regulatory standards and is ideal for use in pharmaceutical, biotechnology, and industrial processes requiring sterile filtration of gases.

Features and Benefits

- PFAS-free hydrophobic PES membrane for sustainable and safe operations.
- Superior chemical and thermal compatibility. Robust construction for repeated steam sterilization cycles. High airflow performance with minimal pressure drop. Excellent bacterial and particulate retention capabilities.
- Meets USP, FDA, and ISO standards for regulatory compliance.

Material of Construction (MOC)

1. FilterMembrane: HydrophobicPolyethersulfone(PES)
2. Supports and Cage: Polypropylene
3. O-Rings: Silicone,
4. Adapter Internal Support: PBT

Test Parameters

- Pore Size: 0.2 μm
- Bubble Point: ≥ 1.1 bar in 60% isopropanol (IPA) 40% water
- Air Diffusion: ≤ 14 mL/min at 0.7 bar
- Bacterial Retention: Retains 10^7 cfu/cm² Brevundimonas diminuta as per ASTM F838
- Phage Retention: Log Reduction Value (LRV) > 7 for Bacteriophage Phi-X174



Applications

- Sterile filtration of compressed air and gases in pharmaceutical processes.
- Ventilation and gas outlets for fermentation and storage tanks.
- Gas sterilization for single-use systems.
- Sterile filling and biotechnological processes.

Compliance

- USP <87>, <88> Biological Reactivity tests
- FDA 21 CFR Indirect Food Additive standards
- ISO 9001:2015 Quality Management System
- Manufactured in ISO Class 8 cleanroom facilities.

Operating Parameters

- Maximum Operating Pressure: 8.0 bar at 25°C Maximum
- Temperature: 80°C continuous use Sterilization: Autoclave at 135°C for
- 100 cycles, Steam-in-Place (SIP) up to 135°C



Product Specifications Table

Specification	Details
Filter	BorsoPES-Biological-AP
Length	254.0 mm (10 in.)
Materials of Construction	
• Filter membrane	Hydrophobic Polyethersulfone (PES)
• Supports	Polypropylene
• Core, cage, and caps	Polypropylene



• Adapter internal support	BPT
• O-rings	Silicone
Pore Size	0.2 µm
Effective Filtration Area (EFA)	0.80 m ² (8.6ft ²)
Maximum Operating Pressure	8.0 bar (116 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Maximum Differential Pressure (Forward)	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Maximum Differential Pressure (Reverse)	3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Bubble Point at 20 °C	≥ 1.1 bar (16 psi) in 60% isopropanol (IPA) 40% water, air
Air Diffusion at 20 °C	≤ 14 mL/min at 0.7 bar (10 psi) wetted with 60% isopropanol (IPA) 40% water
Water Flow Test at 20 °C	≤ 1.2 mL/min at 1.8 bar (26 psi)
Bacterial Retention	Retention of 10 ⁷ cfu/cm ² <i>Brevundimonas diminuta</i> (ATCC® 19146) according to ASTM F838.
Bacterial Retention	Retention of 10 ⁷ cfu/cm ² <i>Brevundimonas diminuta</i> (ATCC® 19146) according to ASTM F838.
Sterilization	
• Steam in place (SIP)	Can be steam sterilized 100 cycles for 30 minutes at 135 °C (< 0.3 bar, 5 psi).
• Autoclave	Can be autoclaved 100 cycles for 30 minutes at 130 °C.
Particle Shedding	Autoclaved filter effluent meets the requirements in USP <788> for large volume parenterals.
Non-Fiber Releasing	Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3 (b) (6).
Non-Fiber Releasing	Aqueous extraction of autoclaved filter contains < 0.25 EU/mL as determined by Amebocyte Lysate, USP <85>.
USP <87> Cytotoxicity	Meet the requirement of USP <87> In Vitro Biological Reactivity Test.



USP <88> Biological Reactivity	Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121 °C plastics.
Indirect Food Additive	All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.
Quality Assurance	These products are manufactured in a facility which adheres to ISO® 9001:2015 Practices.

Catalogue Numbers Description Filter Cartridges

Cartridge Type	Filter Length		Cartridge Adapter Type		O-ring Material		Micronrating	
BPBC-AP	05	5-inch	0	Double open end with flat gasket	SP	Silicone	002	0.2 μm
	1	10-inch	2	226/Flat				
	2	20-inch	7	226/Fin				
	3	30-inch	3	222/Flat				
	4	40-inch	8	222/Fin				



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