

OPTIPOR

DOUBLE LAYER PES MEMBRANE FILTER CARTRIDGE

Beverage, Food & Pharmaceutical Grade

PESP cartridges are made of a unique double-layer polyethersulfone (PES) membrane which provides excellent reliability in filtration and sterilization.

Designed for the filtration of a broad range of pharmaceutical products and the removal of particles, cysts, oocysts and bacteria in water filtration application, while providing superior flow rates and high particle removal efficiency when compared to other sterilizing grade filter cartridges.

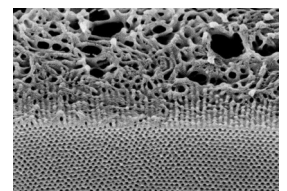
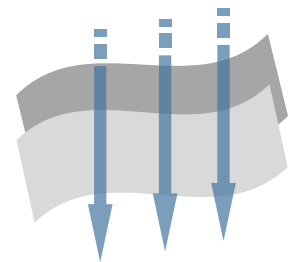
FEATURES AND BENEFITS

- Built in Asymmetric pre-filter layer for longer life and lower filtration costs
- Double-layer hydrophilic PES membrane which requires no pre-wetting
- Broad chemical compatibility (pH 1-14)
- Provides 10x the normal safety compared to normal PES filters
- Designed allows for multiple autoclave cycles (up to 50x) and extended use
- Applications: Sterile API, Ophthalmic solutions, Biological vaccines, Blood products.
LVP and SVP, Lyophilization



QUALITY STANDARDS

- Tested with *Brevundimonas diminuta* (ATCC 19146) at 10^7 - $10^{10}/\text{cm}^2$ (>99.99999%)
- Each individual element is integrity tested (bubble point & diffusion flow)
- Manufactured under a quality management system certified to ISO 9001:2000
- All components materials meets the requirement for food contact detailed in European Regulation (EC) N°1935/2004 and (EU) N° 10/2011



TECHNICAL SPECIFICATIONS

CARTRIDGE DIMENSIONES

- Outer diameter: 69mm
- Length: 5"/127mm 10"/254mm 20"/508mm
30"/762mm 40"/1016mm

MATERIALS OF CONSTRUCTION

- Filter media: Double layer Polyethersulfone (PES) membrane (Asymmetric PES with symmetric PES)
- Support layers: Polypropylene
- Core/Cage/End Caps: Polypropylene
- Standard O' ring/gaskets: Silicone, EPDM, Viton, PFA/Viton
- Internal adaptor, reinforcing ring: PBT

EFFECTIVE FILTRATION AREA (EFA)

- 0.6 m²

OPERATING CONDITIONS	
Max. operating temperature	80°C
Max. Differential pressure	6.9 bar / 25°C
	2.4 bar / 80°C
Steam sterilization (Autoclave)	130°C for 30 min up to 200 cycles
Inline Steaming Sterilize	135°C for 30 min up to 100 cycles



BIOLOGICAL SAFETY	
Extractable (NRV)	< 30mg/10" (Test procedure: Steaming sterilized for 30min at 21°C, then soaked in the purified water for 24hours)
Oxidability	Meets FDA for Oxide Test (Test procedure: Steaming sterilized for 30min at 21°C, then take the sample after purified water washing)
Endotoxin	< 0.25Eu/ml, according to LAL Test
Material Safety	Meets USP <88>, for class VI– 121°C plastics

INTEGRITY TEST PARAMETERS					
	2210	2222	4522	4545	6545
	0.22 + 0.1µm	0.22 + 0.22µm	0.45 + 0.22µm	0.45 + 0.45µm	0.65 + 0.45µm
DIFFUSION FLOW 10" cartridge at 20°C	≤ 25ml/min @ 3bar	≤ 20ml/min @ 2.75bar	≤ 25ml/min @ 3.0bar	≤ 15ml/min @ 1.6bar	≤ 25ml/min @ 1.6bar
BUBBLE POINT Air diffusion at 20°C	≥ 3.8bar	≥ 3.4bar	≥ 3.4bar	≥ 2.0bar	≥ 2.0bar

The integrity test is a non-destructive test that can be performed by the user to ensure the filter is installed correctly and ready for operation

ORDERING INFORMATION

F	PESP						
P							
	LENGTH	MICRON	END CAP (inf)	END CAP (sup)	GASKETS	END CAP INSERT	
	05 - 5"/127mm	2210 - 0.22 + 0.1µm	B - DOE with Gaskets	B - DOE with Gaskets	S - Silicone	(Blank) - No insert	
	10 - 10"/254mm	2222 - 0.22 + 0.22µm	C - 226	F - Flat	E - EPDM	P - PBT	
	20 - 20"/508mm	4522 - 0.45 + 0.22µm	D - 222	S - Spear	V - Viton	S - St.St.	
	30 - 30"/762mm	4545 - 0.45 + 0.45µm	E - 222 Sartorius (3 tabs)				
	40 - 40"/1016mm	6545 - 0.65 + 0.45µm	J - Junior 214				
			K - Junior 216				

DISTRIBUIDO POR:



Calle Mariano Fortuny 10 – El Catllar 43764 – Tarragona

Telf. 977 653135 – info@multifiltra.com

www.multifiltra.com

