

Pur-MAXX E-SG

Dual Layer Pleated Polyethersulfone Membrane Sterilizing Grade Cartridge

The Pur-MAXX E-SG is engineered to meet the highest standards of microorganism control for sterile fluids. Pur-Maxx E-SG filter element is validated for complete removal of *Brevundimonas diminuta* (ATCC 19146) at test concentrations of 10^7 CFU/cm² (Colony Forming Units). This product is ideally suited for applications where microorganism contamination causes product defects or extra processing time due to increase fluid instability.

Pur-Maxx E-SG is produced utilizing a unique multi-pleated configuration integrating highly asymmetric and hydrophilic polyethersulfone membrane with exceptional pleat support materials. This novel multi-pleated approach increases cartridge life, strength and durability. This structural product enhancement allows our filter cartridges to withstand multiple sterilization cycles without sacrificing product integrity.

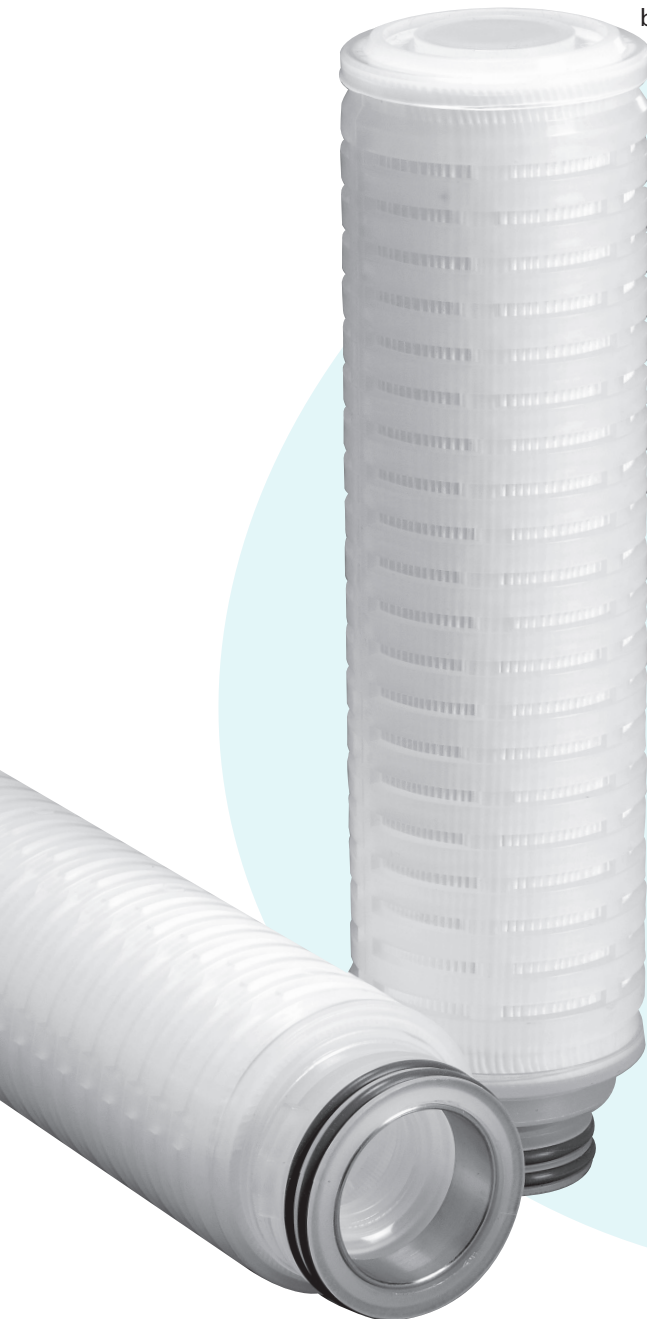
This Sterilizing Grade pleated cartridge complies with FDA CFR Title 21 and USP Biological Reactivity for Class VI Plastics. By combining these ultra pure components with the low protein binding features of highly asymmetric hydrophilic polyethersulfone membrane makes Pur-Maxx E-SG perfect for applications in the biopharmaceutical, and bottled water industries.

Features and Benefits

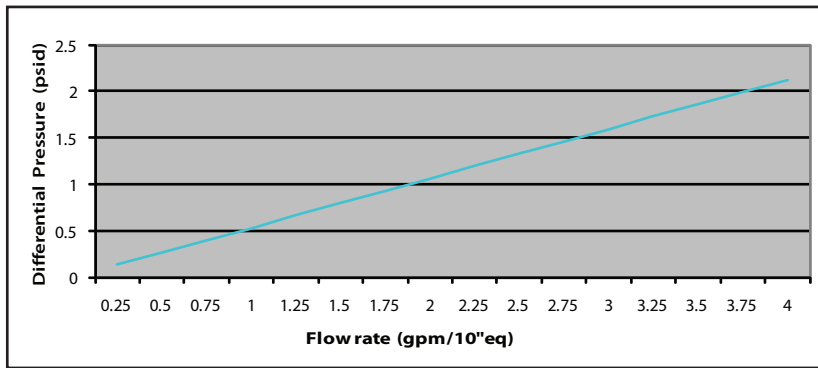
- Validated 0.2 µm absolute rated membrane configuration
High surface area membrane offers excellent life and flux rates while providing absolute filtration
- Absolute-rated dual layer membrane provides reliable, consistent and repeatable filtrate quality
- Low pressure drops yield higher flow rates and reduced processing time
- Non-fiber shedding Polypropylene support materials eliminate fiber migration
- MAXX-imum Pleat Design for greater surface area, ensuring longer service life, fewer change outs and reduced operating costs per element
- All materials of construction are FDA compliant with CFR Title 21 and are bio-safe in accordance with USP Class VI
- 100% Thermally bonded construction
- Low hold-up volumes
- Integrity tested
- High strength design allowing for extended use and multi autoclave and hot water sanitization cycles
- 316 SS reinforced end treatments

Typical Applications

Final filtration of:
WFI & CIP Water
Cell Culture Purification
Buffer Solutions
Vaccines
Diagnostics
LVP (Large Volume Parenterals)



PRMXE-SG Pressure Drop vs. Flow Rate



Integrity Test Values

Pore Size	Bubble Point	Test Pressure	Air Diffusion
PRMXE0.2-SG	22psig	17psig*	≤10mL/min

*50/50 IPA/DI water solution

USP Physiochemical Tests for Plastics

Ultrapure water extracts from multiple lots of PUR-Maxx E-SG cartridges were tested and shown to have values that comply with USP limits.

Test	Results	USP Limit
Non volatile residue	<2mg	<15mg
Heavy Metals	<1ppm	<1ppm
Residue on Ignition	<2mg	<5mg
Buffering Capacity	<1mL	<10ml

Toxicity

Cartridge materials meet USP Class VI and CFR 21 for food and beverage contact

Sterilization:

Cartridge can be sterilized via steam or Autoclave: 20 times at 275°F (135°C) Cartridge may be sanitized in place with common sanitizing agents, contact factory for chemical compatibility

Product Specifications

Materials of Construction

Filter Media:	Polyethersulfone
Support Material:	Polypropylene
End Caps:	Polypropylene
Reinforcing Ring:	316 Stainless Steel
Cage/Core:	Polypropylene
Sealing:	Thermal Bond
Seals:	Buna N, Fluorocarbon, EPDM, Silicone

Dimensions

Outside Dia:	2.7" (6.87cm)
Lengths:	10" (25.4cm), 20" (50.8cm), 30" (76.2cm), 40" (102cm)

Effective Filtration Area: 7ft² (.65m²)

Performance Specifications:

Absolute Rated Retention: 0.20µm

Maximum Forward Differential Pressure

Forward:	75 psid (5.5 bar) @ 75°F (24°C)
	40 psid (2.8 bar) @ 180°F (82°C)
Reverse:	50 psid (3.4 bar) @ 75°F @ (24°C)

Maximum Operating Temperature

180°F (82°C) Continuous Duty

Packaging Economy

Bulk packaging in case quantities to reduce material disposal:

10 inch	24 per carton
20 inch	12 per carton
30 inch	12 per carton
40 inch	9 per carton

Cartridge Series	Micron Rating	Length	Support Materials	End Cap Configurations	Gasket/O-ring Materials	Cartridge Grade
ex. PRMXE	0.2	-10	PP	C7	S	SG
Pur-MAXX E	0.20	10 20 30 40	PP - Polypropylene	C3-SOE flat closed ends, external 222 O-ring C6-SOE flat closed end, external 226 O-ring C7-SOE fin end, external 226 O-ring C8-SOE fin end, external 222 O-ring	S - Silicone (standard O-rings) B - Buna N (standard gaskets) V - Fluorocarbon E - EPDM	SG- Sterilizing Grade