

MPMT Filter Cartridges

■ PTFE Membrane

Mem-Pure Membrane Series

Twice the Flow and Recirculation Rate With Next Generation PTFE Membrane Filter Cartridges

Mega-Pure PTFE membrane filter cartridges provide unsurpassed flow rate capability. Clark-Reliance Filtration Group's PTFE membrane cartridge outperforms all competitive cartridges of the same rating at a ratio of 2 to 1 or greater, thus reducing the number of cartridges and housings required. PTFE membrane filter cartridges are a low-cost alternative to all fluoropolymer cartridges. The Mem-Pure PTFE Membrane Series of filter cartridges meets or exceeds requirements for the filtration of UHP liquids used in the fabrication of state-of-the-art microelectronic devices.

The Mem-Pure PTFE Membrane Series is available in 0.05µm, 0.1µm, 0.2µm, 0.45µm and 1µm pore sizes.

Applications

UHP Chemicals

- Acids
- Solvents
- Photoresists
- Tank Vents
- Etchants
- Alkalies
- Developers
- Strippers
- Recirculation
- Wet-Etch Systems
- Rinse Baths
- Process Gases & Compressed Air
- Polymer Filtration



Features and Benefits

Superior PTFE Membrane Yields Maximum Filtration Results

- High flow rates and reduced pressure drops for improved filtration efficiency.
- Rinsed to 18 megohm-cm resistivity with UHP water.
- Large, high-purity filtration area for maximum yields.
- Non-fiber releasing.
- Narrow pore size distribution ensures the ultimate in retention and flow rate.
- Available prewetted for immediate use in process.

Clark-Reliance Filtration Group Assures Consistent Performance and Reliable Filtration

- Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- Integrity-tested and testable *in situ*.
- Thermally welded, eliminating adhesive extractables.
- Biosafe in accordance with USP Class VI-121°C Plastics Tests.
- Specifically designed to ensure cleanliness.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.



WARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
This document and other information from Clark-Reliance Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met.

Mem-Pure Membrane Series

Specifications

Materials of Construction:

- Membrane: hydrophobic PTFE
- Membrane Support/Drainage: polypropylene
- Structural Components: polypropylene
- Seal Material: various
- Sealing Method: thermal welding

Dimensions:

- Diameter: 2.7 in (6.8 cm)
- Lengths: 10-40 in (25-102 cm)

Surface Area (10 in cartridge):

- Minimum 7.5 ft² (0.7 m²)

Integrity Test:

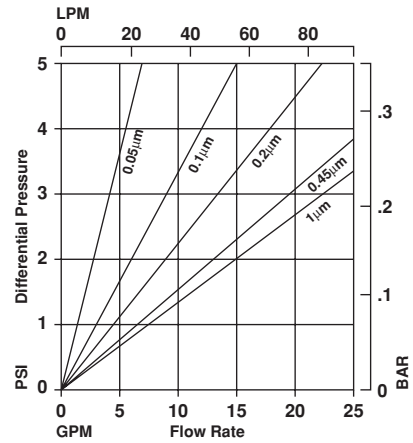
- Bubble Point (100% IPA):
 - 0.05µm: ≥ 50 psig (3.4 bar)
 - 0.1µm: ≥ 24 psig (1.7 bar)
 - 0.2µm: ≥ 16 psig (1.1 bar)
 - 0.45µm: ≥ 6 psig (0.4 bar)
 - 1µm: ≥ 3 psig (0.2 bar)

Recommended Operating Conditions:

- Maximum Temperature: 176°F (80°C) at 30 ΔP (2.1 bar)
- Maximum Differential Pressure:
 - Forward: 70 psi (4.8 bar) at 77°F (25°C)
 - 30 psi (2.1 bar) at 176°F (80°C)
 - Reverse: 50 psi (3.4 bar) at 77°F (25°C)

PTFE Cartridges:

Flow rate vs. ΔP for a 1 cps liquid @ 73°F (23°C)**



Flow Factors:

Pore Size (µm)	GPM/ 1 PSID	LPM/ 1 Bar	PSID/ 1 GPM	Bar/ 1 LPM
0.05	1.5	82	0.67	0.012
0.1	3.0	164	0.33	0.006
0.2	4.5	247	0.22	0.004
0.45	6.5	356	0.15	0.003
1	7.5	411	0.13	0.002

Ordering Information

MPMT	F	B	10	E	TC	E	W
Cartridge Code	Pore Size	Diameter	Length	Seal Material	End Cap Configuration	Grade	Special Preparation
MPMT = PTFE	D = 0.05µm S = 0.1µm F = 0.2µm R = 0.45µm Q = 1.0µm	B = 2.7"	10 = 10" 20 = 20" 30 = 30" 40 = 40"	B = Buna-N D = CR 570 E = EPDM K = KR 4079 S = Silicone T = PFA/Viton V = Viton X = No O-Ring	HH = DOE gaskets SC = 226/Flat SF = 226/Fin TC = 222/Flat TF = 222/Fin	E = Electronics	W = Prewetted with ozonated UHP water

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** Consult factory for gas flow data.