Memtrex* MP

pleated filters with polyethersulfone membrane

Memtrex MP (MMP) filters constructed with hydrophilic polyethersulfone membranes and all polypropylene components, exhibit both enhanced throughput, and reliable particle retention for superior performance in most applications. MMP filters are compatible with a broad range of chemicals and pH extremes. The low protein binding characteristics of the polyethersulfone membranes ensure that MMP filters are suitable in a variety of beverage, chemical, and pharmaceutical applications.

Constructed using thermal welding techniques, the MMP filters do not contain any adhesives or additives, and individual integrity testing assures that MMP filters meet the exacting performance requirements of our customers.

The MMP filter is just one example of our dedicated commitment to fluid filtration. Our extensive portfolio includes filters for every stage of processing, and we can offer custom solutions for your unique applications. SUEZ is your complete source for filters, housings, and other filtration equipment.

materials of construction

Description	Material of Construction
Filtration Media	Hydrophilic Polyethersulfone Membrane
Support Layers	Polypropylene Microfiber
Core and Cage	Polypropylene
End caps and Adapters	Polypropylene
Seal Elastomers	Buna-N, EPDM, Silicone, Viton, Teflon Encapsulated Viton[1]

[1]Viton and Teflon are registered trademarks of Dupont.

regulations

SUEZ certifies that the materials of construction meet the US FDA requirements for food contact under the applicable regulations in 21CFR177. The materials of construction also meet the test criteria for USP Class VI-121C plastics. Aqueous extracts from MMP filters typically contain less than 0.25EU/mL of endotoxin. The filters typically exhibit low levels of non-volatile residues.

dimensions

Nominal O.D.	Nominal I.D.	Effective Filtration Area (per 10" length)
2.75" (70 mm)	1.25" (31 mm)	7.65 to 8.63 ft² (0.711 to 0.802 m²)

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common applications

CHEMICAL PROCESS INDUSTRY

- Dependable particle control in aqueous inks and dyes.
- Filtration of technical grade bulk aqueous chemicals including acids, bases and oxidizers

FOOD AND BEVERAGE

- Clarification and microbial control for bottled water packaging
- Clarification and microbial control for ingredient and process waters
- Filtration for improved microbiological stability of non-pasteurized beers and wines

MEDICAL AND PHARMACEUTICAL APPLICATIONS

- Particulate and bio-burden control in upstream pharmaceutical processes that do not require sterilizing grade filters such as bulk intermediates and large volume parentals
- Filtration for microbiological stability of serums and other cell culture media
- Protection to reduce the loading and extend the service life of downstream sterilizing grade cartridge filters in aseptic packaging operations

MICROELECTRONICS

- Reliable particle control for recirculating ultrapure de-ionized water loops.
- Clarification of bulk high purity aqueous chemicals
- Point of use filtration of purified water and aqueous chemistries

Users should carefully evaluate filter compatibility with application chemistries and operating conditions. Please contact your SUEZ representative if you require assistance.

quality assurance & traceability

Memtrex MP filters are manufactured under a quality management system that has been certified to meet ISO 9001 standards. Each filter is assigned a lot code to ensure traceability of the data and materials used in the manufacturing process.

integrity testing

For assured quality and performance, the subassemblies used to construct the Memtrex MP filters are individually integrity tested.

Pore Size Rating	Specification
0.03 μm	≤ 45 cc/min at 50 psig (3.4 bar)
0.1 μm	≤ 45 cc/min at 50 psig (3.4 bar)
0.2 μm	≤ 19 cc/min at 30 psig (2.1 bar)
0.45 μm	≤ 16 cc/min at 20 psig (1.4 bar)
0.65 μm	≤ 12 cc/min at 13 psig (0.9 bar)
Air diffusion per 10" module after saturation with clean water	

filtration efficiency and microbial retention

Memtrex MP filters are absolute rated. Representative filters meeting integrity test specifications have demonstrated ≥ 99.9% initial particle retention efficiency at the rated pore size based on ASTM F661 test methodology.

Memtrex MP filters have good microbial retention for reliable bioburden control. Representative filters meeting integrity test specifications have demonstrated the following microbial retention characteristics based on ASTM F838-83 test methodology using a nominal challenge of 10^7cfu/cm^2 of membrane area.

Pore Size Rating	Test Organism	Log Reduction Value (LRV)
0.2 μm	Brevundimonas diminuta	≥7
0.45 μm	Searratia marcescens	≥7
0.65 μm	Pediococcus damnosus	≥7

sanitization

Memtrex MP filters may be autoclaved or in situ steam sterilized. Filters which are steam sterilized must have Z or Q adaptors.
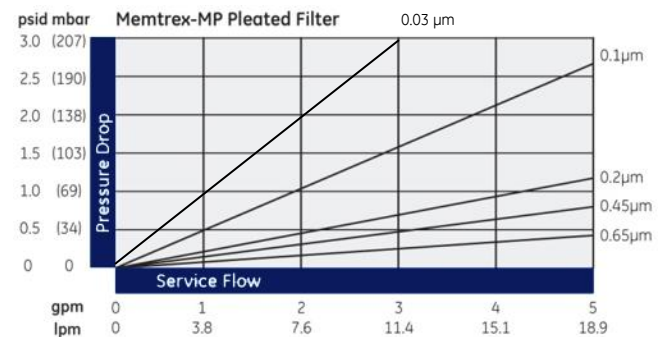
Medium	Maximum Temperature	Maximum Cumulative Exposure
Steam	125°C (257°F)	10 hours

Alternatively, the filters may be sanitized with compatible chemical agents.
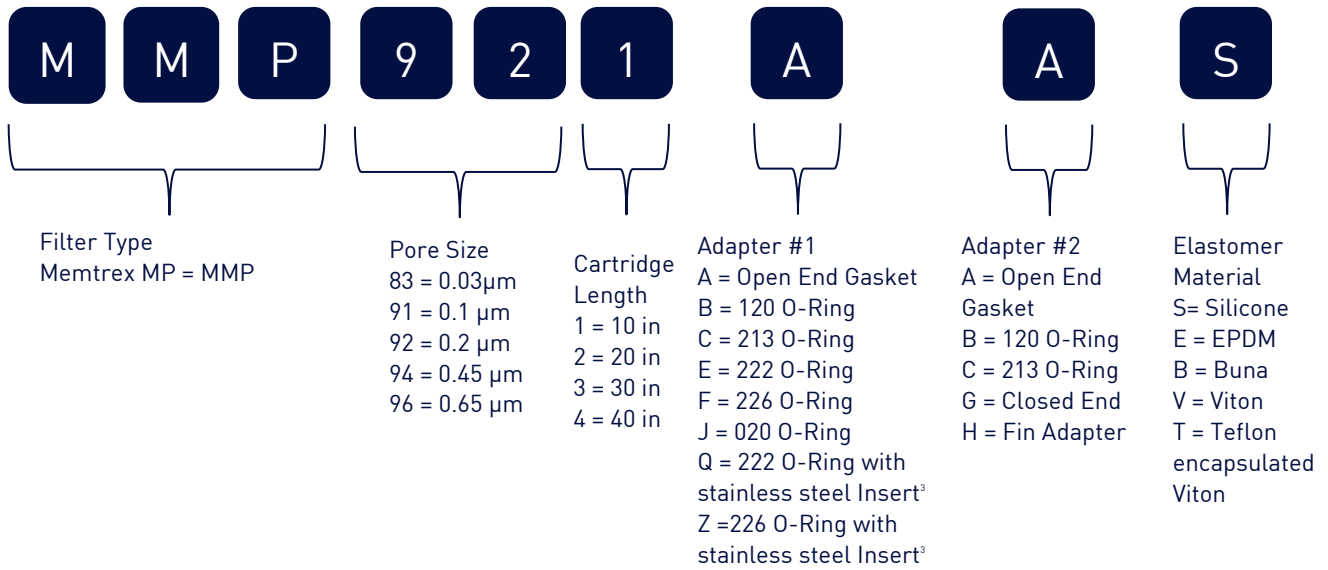
operational limits

Description	Operational Limits
Max. Forward Differential Pressure	60 psi (4.1 bar) at 70°F (21°C)
Max. Reverse Differential Pressure	30 psi (2.1 bar) at 70°F (21°C)
Max. Operating Temperature	180°F (82°C) at 10 psid (0.7 bar) in water

flow performance in clean water

[1]Data based on 10" length filter

ordering information

M	M	P	9	2	1	A	A	S

Filter Type
Memtrex MP = MMP

Pore Size
83 = 0.03μm
91 = 0.1 μm
92 = 0.2 μm
94 = 0.45 μm
96 = 0.65 μm

Cartridge Length
1 = 10 in
2 = 20 in
3 = 30 in
4 = 40 in

Adapter #1
A = Open End Gasket
B = 120 O-Ring
C = 213 O-Ring
E = 222 O-Ring
F = 226 O-Ring
J = 020 O-Ring
Q = 222 O-Ring with stainless steel Insert[3]
Z = 226 O-Ring with stainless steel Insert[3]

Adapter #2
A = Open End Gasket
B = 120 O-Ring
C = 213 O-Ring
G = Closed End
H = Fin Adapter

Elastomer Material
S= Silicone
E = EPDM
B = Buna
V = Viton
T = Teflon encapsulated Viton

[3]Q or Z Adapters normally require G or H adapters.

common adapter configurations

AA   CG   EG   EH   FH

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