Donaldson
Filtration Solutions

PROCESS FILTERS

Ultrapolymem® PF-PP

Membrane filter for purification of solvents, alcohols, chemicals, gases

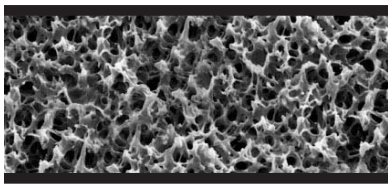
Product Description

The Ultrapolymem PF-PP filter is constructed of 100% polypropylene, including the pleated membrane media, support cage and end caps. It provides maximum durability against chemicals in critical processes.

With similiar performance, durability, and chemical compatibility, Ultrapolymem PF-PP filters offer a cost-effective alternative to PTFE membrane filters.

The polypropylene filter media is inherently hydrophobic, with a highly porous membrane structure. It provides consistent performance throughout its entire service life. PF-PP filters are especially suitable for a wide range of liquids and gases.

The Ultrapolymem PF-PP polypropylene membrane filter is a cost-effective alternative to PTFE



Ultrapolymem PF-PP membrane as seen under the scanning electron microscope

Features

All components meet FDA requirements for contact with food in accordance with CFR (Code of Federal Regulations) Title 21. Ultrapolymem PF-PP filter elements have passed the toxicological tests according to USP XX Class VI for plastics. In particular, requirements of the chemical, biological, cosmetic, electronic and pharmaceutical industries are met.

The membrane is manufactured in accordance with cGMP* requirements, is non-fiber-releasing, and is thermally-welded without the use of binders or other chemical additives.

Applications

- Acids
- Bases
- Alcohols
- Solvents
- Etchants
- Photoresists
- Compressed Air
- Te

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* cGMP: current Good Manufacturing Practices

Features	Benefits
All-polypropylene construction	Strong durability against chemicals, permits use in broad range of fluids and applications
Absolute ratings of 0.04, 0.1 and 0.2 µm	Precise particle retention at rated level, 0.2 µm meets bacterial validation acc. to HIMA/ASTM standards
Unique polypropylene membrane	High flow rates, long service life, cost effective alternative to PTFE membranes
Inherently hydrophobic	Natural barrier to water without the use of additives or surface modifying agents which can leach or wash out
Rugged thermal bonded construction	Reliable integrity under severe process conditions withstands multiple sterilizations
Contains no binders or adhesives	Wide solvent compatibility, extremely low extractables
Fully integrity testable	Assurance of product integrity and effectiveness in operation
Biologically inert and non-toxic	Meets FDA requirements for food contact, passed UPS Class VI biological tests for plastics
100% integrity tested by factory	Assured product reliability and consistency

Dimensions

Diameter:	2.75"
Length:	5", 10", 20", 30" or 40"

Integrity testing

Wetting agent Isopropylalcohol (IPA)

Pore size	Bubble point
0.04 µm	≥ 26 psig
0.1 µm	≥ 22 psig
0.2 µm	≥ 9 psig

Maximum differential pressure

Operating temp.	Differential pressure
100°F	80 psid
150°F	60 psid
180°F	30 psid

Materials

Membrane:	Polypropylene
Upstream support:	Polypropylene
Downstream support:	Polypropylene
Outer guard:	Polypropylene
Endcaps:	Polypropylene
O-Ring:	Silicone, Buna N, EPDM or Viton®

*Viton is a registered trademark of E.I. du Pont de Nemours and Company

Bacterial retention

HIMA challenge per ASTM 0.2 µm Pseudomonas diminuta

Filtration surface

6.5 ft^2 for 10" element

Sterilization

In-line sterilization with slow speed saturated steam
250°F - 275°F for 30-60 minutes

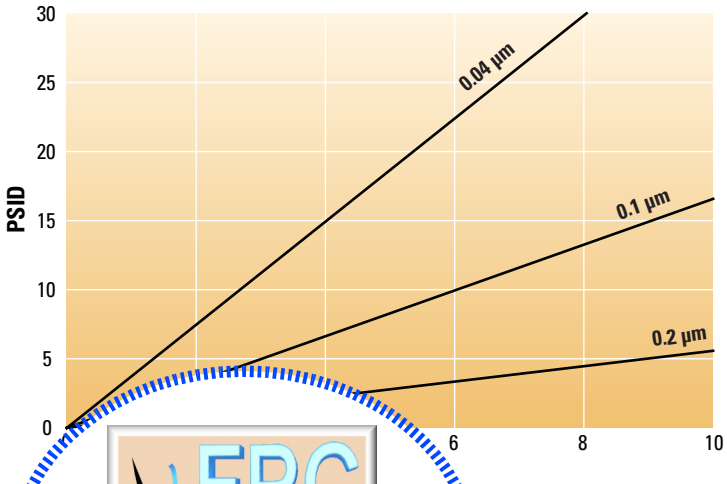
Autoclave
260°F for 30-60 minutes

Ultrapolymem® PF-PP filter elements are capable of repeated sterilization cycles without loss of integrity

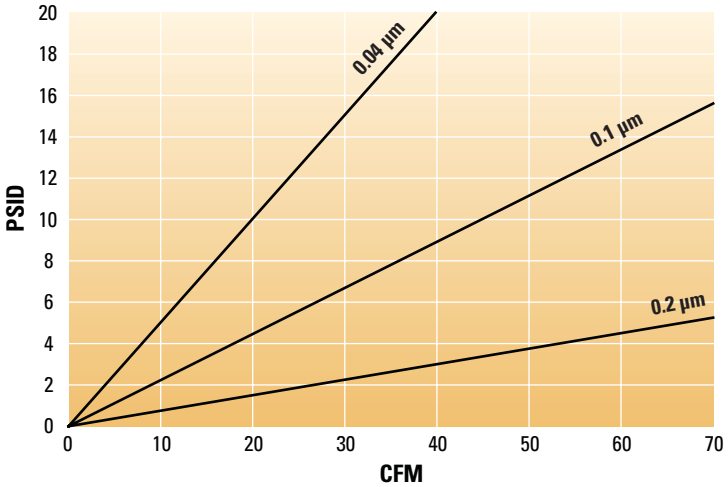
Absolute retention rate

0.04 µm, 0.1 µm, 0.2 µm

PF-PP Pressure Drop per Ten Inch Equivalent (TIE) — Water



PF-PP Pressure Drop per Ten Inch Equivalent (TIE) — Air



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