

# Ultrateflomem® PF-PT

*Membrane for filtration of aggressive solvents, chemicals and gases*

## Product Description

The Ultrateflomem® filter is a pleated PTFE membrane filter that offers maximum assurance of filtration performance and durability against chemicals in severe process conditions. The filter element is manufactured exclusively by using Teflon® and polypropylene. The retention rate extends from 0.1 µm to 1 µm. The Teflon® filter media is inherently hydrophobic with a highly porous membrane structure. This ensures high flow rates and a high absorption of particles during the entire service life. The end caps and the Teflon® membrane are thermally welded without the use of binders. This results in an integral filter cartridge that provides maximum durability against chemicals with minimal extractables.

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

## Features

All components meet FDA requirements for contact with food in accordance with the CFR (Code of Federal Regulations), Title 21. Ultrateflomem® filter elements have passed the toxicological tests according to USP XX Class VI for plastics. In particular, the requirements of the chemical, biological, cosmetic, electronic and pharmaceutical industries are fulfilled. The Ultrateflomem® filter is designed to remove particles, micro-organisms and colloids from aggressive solvents, caustic liquids or gases. The membrane is manufactured in accordance with cGMP requirements (current Good Manufacturer Practice), is non-fiber releasing and is thermally welded without the use of binders or other chemical additives.

## Applications

The Ultrateflomem® PF-PT membrane filter, among other Donaldson filters, is designed and developed for:

- Chemical industry
- Pharmaceutical industry
- Biotechnology
- Breweries
- Dairies
- Aseptic packaging
- Food industry
- Hospitals

For filtration of aqueous solutions, the Ultrateflomem® membrane has to be prelubricated with a suitable liquid of low surface tension (e.g. IPA). Due to the inherently hydrophobic filter media, the Ultrateflomem® membrane is also suitable for the following gases:

- Compressed air
- Fermentation air
- Technical gases
- Tank ventilation



**Ultrateflomem® PF-PT Teflon® membrane filter for filtration of aggressive solvents, chemicals and gases**



**SEM of Ultrateflomem® membrane**

Features	Benefits
Inert PTFE and polypropylene components	Extremely wide durability range against chemicals, permits use in broad range of fluids and applications
Absolute ratings of 0.1 µm, 0.2 µm, 0.45 µm and 1.0 µm	Precise particle retention at rated level, 0.2 µm and 0.45 µm meet bacterial validation acc. to HIMA/ASTM standards
Highly porous Teflon® membrane	High flow rates, long service life, maximum chemical resistance with minimum extractables
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 use, passes USP Class VI biological test for plastics
100% integrity tested by factory	Assured product reliability and consistency

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

Filtration surface	
6.5 ft <sup>2</sup> for 10" element (10/30)	

Materials	
Filter medium:	Teflon®
Upstream support:	Polypropylene
Downstream support:	Polypropylene
Outer guard:	Polypropylene
Endcaps:	Polypropylene
O-Rings:	Silicone, Buna N, EPDM or Viton®

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

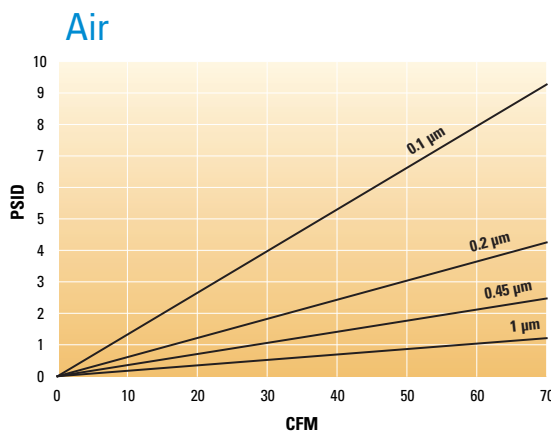
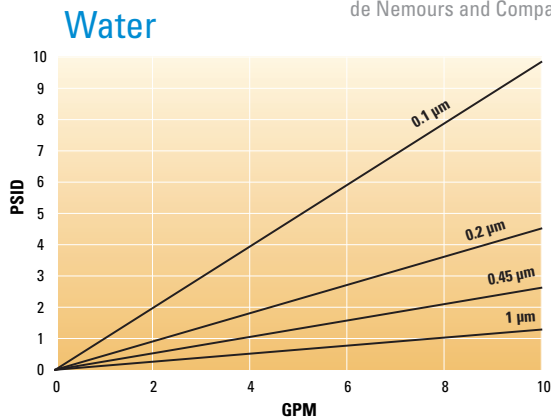
Bacterial retention
HIMA challenge per ASTM
0.2 µm Pseudomonas diminuta
0.45 µm Serratia marcescens

Integrity testing	
Wetting agent Isopropylalcohol (IPA)	
Pore size	Bubble point
0.1 µm	≥ 18 psig
0.2 µm	≥ 14 psig
0.45 µm	≥ 7 psig
1.0 µm	not testable

Sterilization
<b>In-line sterilization with slow speed saturated steam</b>
250-275°F for 30-60 minutes
<b>Autoclave</b>
260°F for 30-60 minutes
Ultrateflomem® filter elements are capable of repeated sterilization cycles without loss of integrity

Maximum differential pressure	
<b>Operating temp.</b>	<b>Differential pressure</b>
100°F	80 psid
150°F	60 psid
180°F	30 psid

Absolute retention rate
0.1 µm, 0.2 µm, 0.45 µm and 1 µm



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