

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
- Dairies
- Aseptic packaging
- Food industry
- Hospitals



Filter Products Company

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- Technical gases
- Tank ventilation



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



SEM of Ultrateflomem® membrane

...tions, the Ultrateflomem® membrane has to be prelubricated surface tension (e.g. IPA). Due to the inherently hydrophobic m® membrane is also suitable for the following gases:

| 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 ² 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

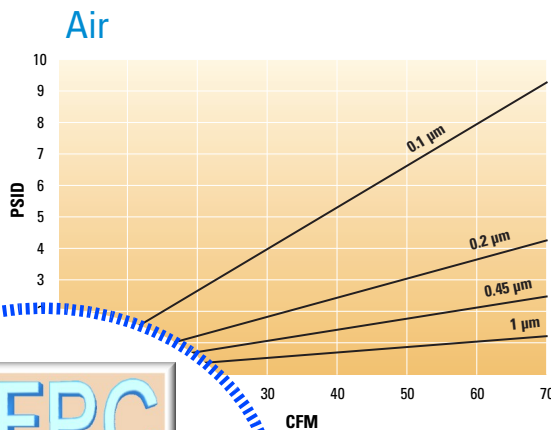
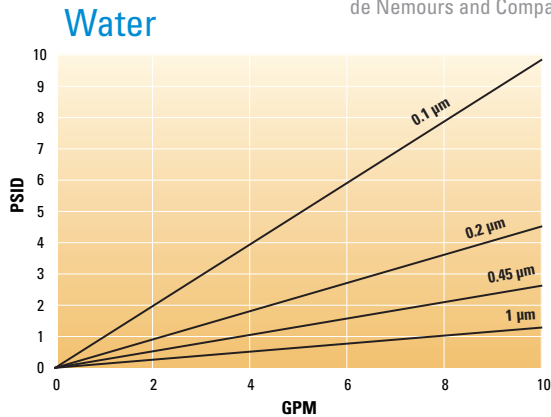
| Bacterial retention |
|-----------------------------|
| HIMA challenge per ASTM |
| 0.2 µm Pseudomonas diminuta |
| 0.45 µm Serratia marcescens |

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

| Maximum differential pressure | |
|-------------------------------|------------------------------|
| Operating temp. | Differential pressure |
| 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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