

ultrateflomem[®] P-PF-PT

The membrane for the filtration of aggressive solvents, chemicals and gases.

Product description:

The ultrateflomem[®] filter is a pleated PTFE membrane filter, which offers maximum assurance of filtration performance and durability range 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 (for gases down to 0.01 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 which provides maximum durability range against chemicals with minimal extractables.

Features:

All components meet the FDA requirements for the 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 the 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 the cGMP requirements (current Good Manufacturer Practice), is non-fibre releasing and is thermally welded without the use of binders or other chemical additives.

Applications:

The ultrateflomem[®] Teflon^{*} membrane is, among others, designed and developed for the following applications:

- Highly concentrated acids
- Bases
- Alcohols
- Chlorinated and fluorinated solvents
- Etchants
- Esters
- Ketones
- Photolithographic liquids

For the 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

Absolute retention rate:

0,1 μm , 0,2 μm , 0,45 μm , 1 μm for gases
0,01 μm to 0,1 μm

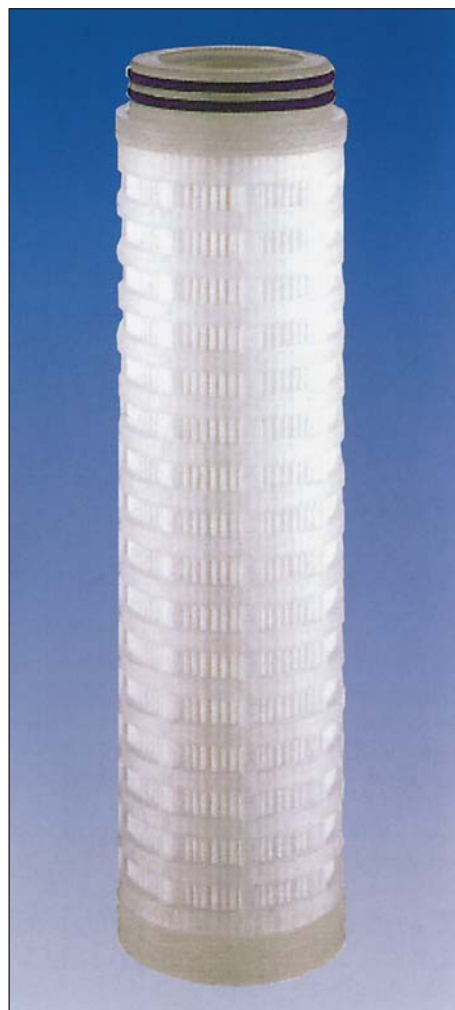
Bacterial retention:

HIMA challenge per ASTM

0.2 μm	Pseudomonas diminuta
0.45 μm	Serratia marcescens

Integrity testing (wetting agent water):

Pore size	Bubble point
0.1 μm	$\geq 1,25$ bar, 18 psi
0.2 μm	$\geq 1,0$ bar, 14 psi
0.45 μm	$\geq 0,5$ bar, 7 psi



The ultrateflomem[®] P-PF-PT – Teflon^{*} membrane filter for the filtration of aggressive solvents, chemicals and gasses

Sterilisation:

- In-line sterilisation with slow speed saturated steam
121°C – 135°C (250°F – 275°F)
for 30–60 minutes
- Autoclave
125°C (260°F) for 30 minutes
ultrateflomem[®] filter elements are capable of repeated sterilisation cycles – without loss of integrity