

Microcap™ **PPTFE**

PTFE Pleated Membrane Capsules



Microcap™ PPTFE capsules are manufactured for the critical Typical Applications needs of the pharmaceutical industry.

Made with highly hydrophobic polytetrafluoroethylene (PTFE) membrane, these capsules are used for the filtration of non-aqueous liquids, aggressive solvents, compressed gases and as vent filters. Each module is individually tested using the water intrusion method before it is released from manufacture.

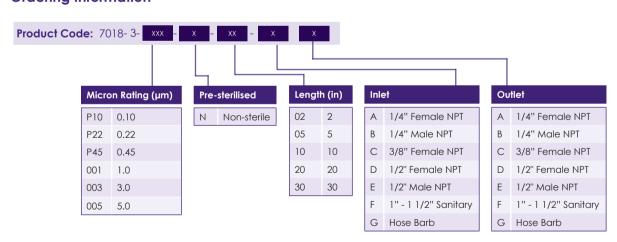
The capsule media surface area, filter core design, pleat configuration and pleat packing density have been optimised to provide increased life resulting in lower filtration • Guaranteed microbial ratings. operating costs.

- · Solvent filtration
- · Fermentation air
- Tank vent filters
- · Process gas
- · Compressed air filtration

Features and Benefits

- Optimised for maximum filter life.
- · Maximized bio-burden reduction.
- Low TOC levels.

Ordering Information



Specifications

Materials of Manufacture

Housing: Polypropylene

Filtration media: PTFE membane (absolute

rated)

Media support:

End caps:

Centre core:

Outer support cage:

Sealing method:

Polypropylene

Polypropylene

Polypropylene

Thermal bonding

Sanitisation/Sterilisation

Autoclave: 121°C (250°F), 30 min,

5+ cycles.

Chemical sanitisation: Industry standard

concentrations

of hydrogen peroxide, peracetic acid, sodium hypochlorite and

other selected chemicals.

Note: Microcap™ PPTFE capsules

are not designed for steam-

in-place (SIP).

Flow Rate

The following tables represent typical water flow at 69mbar (one psi) pressure differential across a single 2" capsule with 1.4 ft² (0.13 m²) of media with 1" sanitary ports. The liquid test fluid is water at ambient temperature. The gas test fluid is compressed air at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Air/Gas flow rates						
µm rating	0.10	0.22	0.45	1.0	3.0	5.0
SCFM	3	7	10	13	15	17

Liquid flow rates						
µm rating	0.10	0.22	0.45	1.0	3.0	5.0
GPM	0.23	0.35	0.85	1.3	1.7	2.0
LPM	0.87	1.32	3.22	4.92	6.44	7.57

Maximum Operating Parameters

Liquid operational pressure: 5.5bar (80psi) at 20°C (68°F) Gases operational pressure: 4.1bar (60psi) at 20°C (68°F) Operating temperature: 43°C (110°F) at 2.1bar (30psi)

in water

Reverse differential pressure: 2.7bar (40psi) at 20°C (68°F)

Recommended changeout

pressure: 2.4bar (35psi)

Filtration Area

Media	Capsule length				
	2"	5"	10"	20"	30"
PTFE membrane	1.4ft ² (0.13m ²)	3.8ft ² (0.35m ²)	8.2ft ² (0.76m ²)	16.4ft ² (1.52m ²)	24.6ft ² (2.29m ²)

Integrity Test Specifications

Minimum Bubble Point for capsules wetted with 60% IPA/40% water solution.

Pore size (µm)	Bubble point
0.10	1.52bar (22psi)
0.22	1.24bar (18psi)
0.45	0.62bar (9psi)
1.0	0.41bar (6psi)
3.0	0.14bar (2psi)
5.0	0.07bar (1psi)

Validation

MicrocapTM PPTFE capsules are validated using test procedures that comply with ASTM F838-15 protocols for the determination of bacterial retention in liquids. The challenge level is a minimum of 10⁷ organisms per cm² of filter media. Capsules have > 7-log removal when challenge with the organisms listed below.

0.10µm: Brevundimonas diminuta 0.22µm: Brevundimonas diminuta 0.45µm: Serratia marcescens

Validation Guide available upon request.

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