

## Microcap™ PPP

Pharmaceutical Grade  
Pleated Polypropylene  
Capsules



Microcap™ PPP capsules are used for the pre-filtration of bulk pharmaceutical chemicals, water, buffers, solvents, alcohols and other liquids. They are also designed to protect membrane filters in filling applications for SVPs, LVPs, diagnostics, ophthalmics, biologicals and other products.

Made with polypropylene microfibre media, and designed with the optimal filtration area, these filters remove large amounts of particulate and other contaminants.

Microcap™ PPP capsules protect critical membrane filters downstream by removing 99.9% ( $\beta$  ratio = 1000) of contaminants at the rated pore size.

Polypropylene exhibits broad chemical compatibility, so it is particularly suited for the filtration of chemicals and solvents used in the drug making processes.

Microcap™ PPP capsules are integrity tested during manufacture and are flushed to ensure cleanliness in critical process applications.

### Typical Applications

- Bulk pharmaceutical chemicals
- Buffers and other media
- LVPs and SVPs
- Biologicals
- Water
- Ophthalmics
- Diagnostics

### Features and Benefits

- Protect's critical membrane filters downstream.
- Wide range of high efficiency retention ratings
- High capacity for long life.
- USP Class VI approved.
- Uses FDA compliant materials.

### Ordering Information

Product Code: 7018-1-xxx-x-xx-x-x

Micron Rating ( $\mu\text{m}$ )		Pre-sterilised		Length (in)		Inlet		Outlet	
P10	0.10	N	Non-sterile	02	2	A	1/4" Female NPT	A	1/4" Female NPT
P22	0.22	S	Sterile	05	5	B	1/4" Male NPT	B	1/4" Male NPT
P45	0.45			10	10	C	3/8" Female NPT	C	3/8" Female NPT
P65	0.65			20	20	D	1/2" Female NPT	D	1/2" Female NPT
001	1.0			30	30	E	1/2" Male NPT	E	1/2" Male NPT
003	3.0					F	1" - 1 1/2" Sanitary	F	1" - 1 1/2" Sanitary
005	5.0					G	Hose Barb	G	Hose Barb
010	10								
020	20								
030	30								
040	40								
060	60								
100	100								

## Specifications

### Materials of Manufacture

Housing:	Polypropylene
Filtration media:	Pleated polypropylene depth media
Media support:	Polypropylene
End caps:	Polypropylene
Centre core:	Polypropylene
Outer support cage:	Polypropylene
Sealing method:	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™ PPP capsules are not designed for steam-in-place (SIP).

### Flow Rate

The following table represents typical water flow at a one psi (69mbar) pressure differential across a single 2 inch capsule with 1.1 ft<sup>2</sup> (0.10 m<sup>2</sup>) of media with 1" sanitary ports. The liquid test fluid is water at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore size (µm)	0.10	0.22	0.45	0.65	1.0	3.0	5.0	10	20	30	40	60	100
GPM	0.15	0.39	0.54	0.69	0.92	1.0	1.1	1.3	1.7	>1.7	>1.7	>1.7	>1.7
LPM	0.57	1.5	2.0	2.6	3.5	3.8	4.2	4.9	6.4	>6.4	>6.4	>6.4	>6.4

### Maximum Operating Parameters

Liquid operational pressure:	5.5bar (80psi) at 20°C (68°F)
Gases operational pressure:	60psi (4.1bar) 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"
Pleated polypropylene depth	1.1ft <sup>2</sup> (0.10m <sup>2</sup> )	2.9ft <sup>2</sup> (0.27m <sup>2</sup> )	6.24ft <sup>2</sup> (0.58m <sup>2</sup> )	12.48ft <sup>2</sup> (1.16m <sup>2</sup> )	18.72ft <sup>2</sup> (1.74m <sup>2</sup> )

Average – Filtration area varies with media thickness and porosity.