

Microcap™ PNY

Pleated Nylon Membrane Capsules



Microcap™ PNY capsules are designed to be used for sterilising grade filtration. The high quality nylon membrane is optimised for retention. PNY capsule filter elements are 100% integrity tested during production.

Nylon capsules see broad service in sterile fill applications in SVPs and as bioburden management filters in LVPs. Media and service liquid filtration are other common applications for this membrane.

Additional applications for Microcap™ PNY capsule filters include the final filtration of bulk pharmaceutical chemicals, USP Purified Water, Water for Injection (WFI), buffers, solvents, alcohols and other excipients. Nylon is particularly suited for the filtration of solvents because of its broad compatibility and low level of extractables.

Typical Applications

- Bulk pharmaceutical chemicals
- SVPs and LVPs
- Buffers and other media
- Solvents
- WFI water
- Feedstock

Features and Benefits

- Optimised for retention.
- Broad solvent compatibility.
- Guaranteed microbial ratings.
- Excellent chemical compatibility.
- Integrity at low TOC levels.
- USP Class VI approved.
- Uses FDA compliant materials.

Ordering Information

Product Code: 7018- 5- xxx - x - xx - x x

Micron Rating (µm)

P10	0.1
P22	0.22
P45	0.45
P65	0.65

Pre-sterilised

N	Non-sterile
S	Sterile

Length (in)

02	2
05	5
10	10
20	20
30	30

Inlet

A	1/4" Female NPT
B	1/4" Male NPT
C	3/8" Female NPT
D	1/2" Female NPT
E	1/2" Male NPT
F	1" - 1 1/2" Sanitary
G	Hose Barb

Outlet

A	1/4" Female NPT
B	1/4" Male NPT
C	3/8" Female NPT
D	1/2" Female NPT
E	1/2" Male NPT
F	1" - 1 1/2" Sanitary
G	Hose Barb

Specifications

Materials of Manufacture

Housing:	Polypropylene
Filtration media:	Nylon 6,6 membrane
	(absolute rated)
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:	Nylon does not tolerate aggressive chemical sanitisation protocols. Nylon membrane cartridges are best sanitised with 1% hydrogen peroxide or 1% hydrogen peroxide and peracetic acid. Follow the manufacturers instructions for use on nylon filter devices.
Note:	Microcap™ PNY capsules are not to be used in steam.
Pre-Sterilised:	PNY capsules are offered in both non- and pre-sterilised forms.

Flow Rate

The following table represents typical water flow at a one psi (69bar) pressure differential across a single 2 inch capsule with 1.0 ft² (0.093 m²) of media with 1/2" FNPT ports. The 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.

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:	110°F (43°C) at 30psi (2.1bar) in water
	Forward differential pressure:
	3.4bar (50psi) at 20°C (68°F)
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"
Nylon, 6,6 membrane	1.0ft ² (0.09m ²)	3.0ft ² (0.28m ²)	7.0ft ² (0.65m ²)	14.0ft ² (1.30m ²)	21.0ft ² (1.95m ²)

Integrity Test Specifications

Pore size	Test pressure (psi)	Max. diffusion rate (cc/min -water wetted membrane)				
		2"	5"	10"	20"	30"
0.10	48	2.1	6.3	15	30	45
0.22	35	2.1	6.3	15	30	45
0.45	20	2.1	6.3	15	30	45
0.65	15	2.1	6.3	15	30	45

Pore size (µm)	0.10	0.22	0.45	0.65
GPM	0.14	0.25	0.43	0.60
LPM	0.53	0.95	1.63	2.27

For approximate flow rates for 5" through 30" capsules, refer to the appropriate cartridge data sheet