



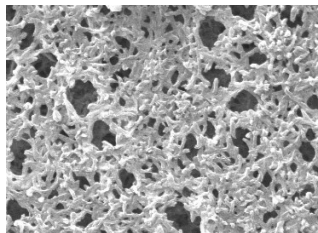
## FNM Micro Capsule Filters

Nylon 6,6 Membrane

FNM Micro Capsule filters are constructed with long-proven, absolute rated, Nylon 6,6 membrane. Designed to comply with all FDA requirements for the food industry, these high purity filters are used for removing organisms in non-fermenting liquids and cleaning water. Pore sizes range from 0.10 to 0.65  $\mu\text{m}$ .

FNM Micro Capsule filters are: optimized for flow and high retention; flushed to reduce extractables; and are 100% integrity tested.

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company's solution right the first time.



FNM Micro Capsule filters are recommended for:

- Syrups
- Soft Drinks
- Bottled Water
- Container Wash/Rinse Water
- Process Water

### Bacteria/Yeast/Mold Removal



#### MICRO CAPSULES – Nominal Dimensions

Body Length: 1.9 in. (4.8 cm)

Overall Length: 2.8 to 3.8 in. (7.1 to 9.7 cm)

Outside Diameter: 2.6 in. (6.6 cm)

## Maximum Operating Parameters

MICRO CAPSULES	
<b>Liquid Operational Pressure</b>	80 psi at 68 °F (5.52 bard at 20 °C)
<b>Gases Operational Pressure</b>	60 psi at 68 °F (4.14 bar at 20 °C)
<b>Operating Temperature (water)</b>	110 °F at 30 psid (43 °C at 2.07 bard)
<b>Forward Differential Pressure</b>	Liquid - 80 psid at 68 °F (5.52 bard at 20 °C) Gas - 60 psi at 68 °F (4.14 bar at 20 °C)
<b>Reverse Differential Pressure</b>	50 psid at 68 °F (3.45 bard at 20 °C)
<b>Recommended Changeout Pressure</b>	35 psid (2.41 bard)

## Sanitization & Sterilization

<b>Autoclave</b>	250 °F (121 °C), 30 min, 25+ cycles
<b>Chemical Sanitization</b>	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, and other selected chemicals.

## Filtration Area (Nominal)

Area	0.58 ft <sup>2</sup>
	539 cm <sup>2</sup>

## Validation

FNM Micro Capsule filters are validated using test procedures that comply with ASTM F 838-15(ae1) protocols for the determination of bacterial retention in filters used for liquid filtration. The filters are challenged with the organisms listed below.

0.10µm: *Brevundimonas diminuta*

0.22µm: *Brevundimonas diminuta*

0.45µm: *Serratia marcescens*

0.65µm: *Saccharomyces cerevisiae*

## Extractables

FNM Micro Capsule filters typically exhibit low levels of non-volatile residues.

## Non-Fiber Releasing

FNM Micro Capsule filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

## FDA and EC Compliance

Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.

## Construction Materials

<b>Filtration Media</b>	Nylon 6,6 Membrane with polyester support
<b>Media Support</b>	Polypropylene
<b>End Caps, Center Core, Outer Support Cage, Micro Capsule Housing</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding

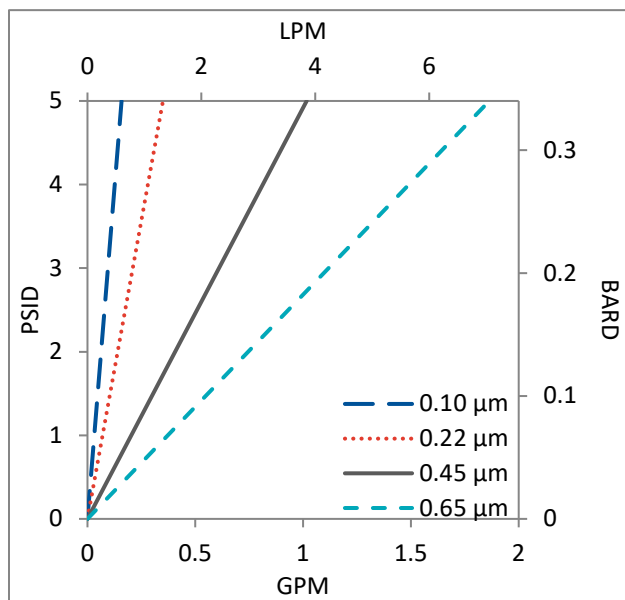
## Integrity Testing

PORE SIZE	BUBBLE POINT MINIMUM*	
	PSIG	BARG
µm		
0.10	**	**
0.22	50	3.4
0.45	25	1.7
0.65	19	1.3

\* All specifications are for water wetted membrane

\*\* Test pressure exceeds operational limits of capsule filters. Use the Diffusion Test method.

## Flow Rates for FNM Micro Capsules by Pore Size



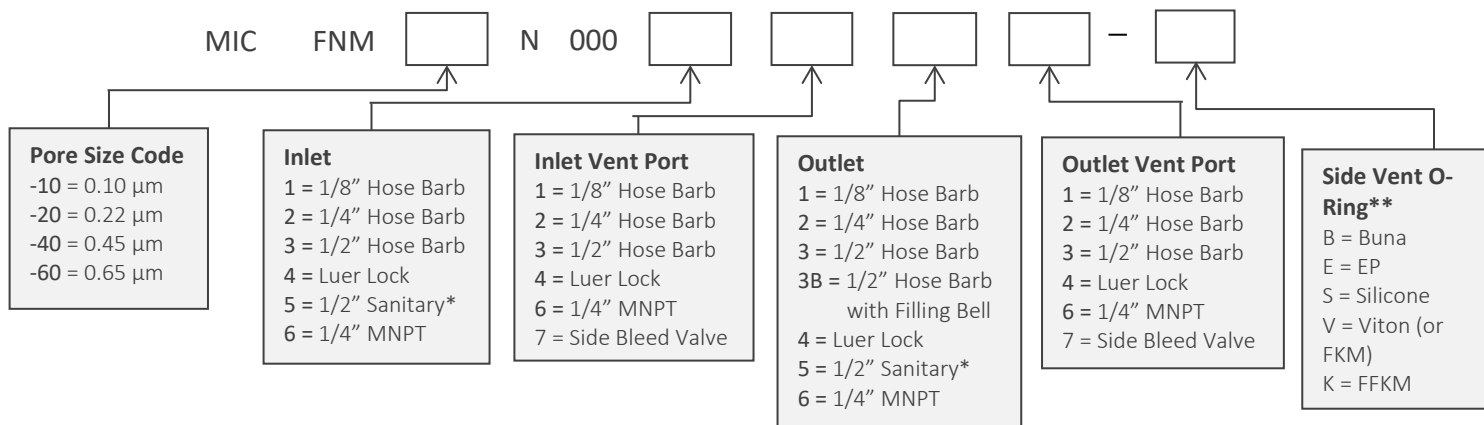
Flow rates for Micro Capsule filters are per filter. The test fluid is water at ambient temperature. Flows are tested using a Micro capsule filter with 1/2" Sanitary inlet and outlet ports. Rates will vary based on end configuration of the Micro capsule.

## FNM Micro Capsule Filters Ordering Information

All Critical Process filters are configurable to meet customer specifications. Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order: call (603) 880-4420 or [contact us here](#).

### Micro Capsule Filters



\*When choosing the Sanitary Inlet/Outlet, the Luer Lock or bleed valve option is required for the Vent Port

\*\* O-Ring is only available on Bleed Valve



One Chestnut Street  
Nashua, NH 03060  
603.880.4420  
FAX: 603.880.4536

CriticalProcess.com

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