ENM Micro Capsule Filters

Nylon 6,6 Membrane

ENM Micro Capsule filters are made with Nylon 6,6 membrane. These long-proven filters are used for ultrafine particle removal in ultrapure water, chemicals, solvents and other aqueous solutions. Pore sizes range from 0.10 to 0.65 µm and the filter sizes scale from laboratory to full production using identical materials to ensure consistent results.

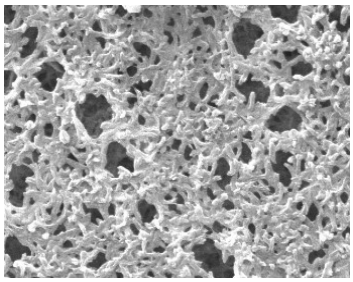
The ENM Micro Capsule filters have high retention and throughput as well as broad chemical compatibility making them well suited for the filtration of solvents and other harsh chemicals. They are used to as part of particle contamination control systems and remove ultrafine particles.

ENM Micro Capsule filters are pulse power flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3ppb TOC. Each filter is individually tested to ensure integrity.

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.

Fine Particle 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)



ENM Micro Capsule filters are recommended for:

- Ultrapure Water
- Chemicals
- Solvents
- Photoresists
- Developers

Maximum Operating Parameters

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

Sanitization & Sterilization

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

Integrity Testing

PORE SIZE	DIFFUSION TEST PRESSURE*	
µm	PSIG	BARG
0.10	48	3.30
0.22	35	2.41
0.45	20	1.37
0.65	15	1.03

* All specifications are for water wetted membrane
** Test pressure exceeds operational limits of capsule filters. Use the Diffusion Test method.

Filtration Area (Nominal)

Area	0.58 ft^2
	539 cm^2

Construction Materials

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

Extractables

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

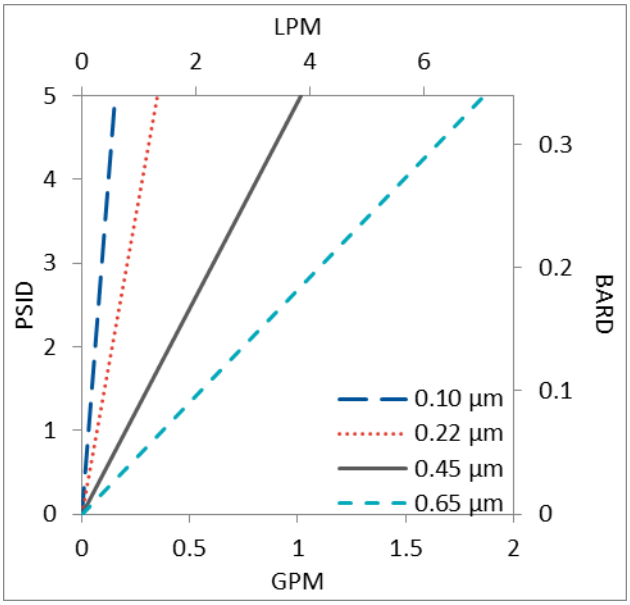
TOC and Conductivity

ENM Micro Capsule filter water effluent conforms with the TOC and water conductivity standards of SEMI Standard F63 after an appropriate flush with ultrapure water.

Non-Fiber Releasing

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

Flow Rates for ENM Micro Capsules by Pore Size



Flow rates for Cartridge filters are per 10-inch length. The test fluid is water at ambient temperature.

ENM 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

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Pore Size Code
-10 = 0.10 µm
-20 = 0.22 µm
-40 = 0.45 µm
-60 = 0.65 µm

Pre-Sterilized or Not
S = Pre-Sterilized
N = Not Sterilized

Inlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
5 = 1/2" Sanitary*
6 = 1/4" MNPT

Inlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT
7 = Side Bleed Valve

Outlet
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
3B = 1/2" Hose Barb with Filling Bell
4 = Luer Lock
5 = 1/2" Sanitary*
6 = 1/4" MNPT

Outlet Vent Port
1 = 1/8" Hose Barb
2 = 1/4" Hose Barb
3 = 1/2" Hose Barb
4 = Luer Lock
6 = 1/4" MNPT
7 = Side Bleed Valve

Side Vent O-Ring**
B = Buna
E = EP
S = Silicone
V = Viton (or FKM)
K = FFKM

*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

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