



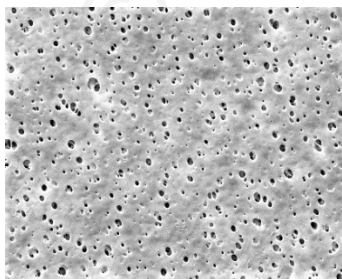
VPS Micro Capsule Filters

Dual Layered PES Membrane

For removing unwanted organisms from products with high particle loads, VPS Micro Capsule filters offer a wide selection of validated, dual layer Polyethersulfone (PES) filters for the filtration of consumable liquids. These filters comply with FDA requirements and EC directives for food and beverage manufacturing and food contact. Pore sizes range from 0.22 to 1.2 μm and the filter sizes scale from laboratory to full production using identical materials to ensure consistent results.

The VPS Micro Capsule filter's low protein binding characteristics are well suited for filtering fermented beverages. They retain organisms while allowing valuable flavor components to pass through the filter. VPS Micro Capsule filters deliver high flow and throughput with compatibility across a wide pH range. They are flushed with high purity water to remove extractables that may affect the taste of the product. Products 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.



VPS Micro Capsule filters are recommended for:

- Wine, Beer
- Juices
- Bottled Water
- Aseptic Packaged Liquids
- 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	
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, sodium hypochlorite and other selected chemicals.

Integrity Testing

PORE SIZE	BUBBLE POINT MINIMUM*	
	PSIG	BARG
μm		
0.22	50	3.4
0.45	25	1.7
0.65	19	1.3
0.80	15	1.0
1.0	10	0.7
1.2	9	0.6

* For water wetted membrane

Validation

VPS 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.

0.22μm: *Brevundimonas diminuta*

0.45μm: *Serratia marcescens*

0.65μm: *Saccharomyces cerevisiae*

Extractables

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

Filtration Area (Nominal)

Area	0.50 ft ²
	465 cm ²

Construction Materials

Filtration Media	High Capacity PES membrane on polyester support prefilter layer and PES membrane final filter layer
Media Support	Polypropylene
End Caps, Center Core, Outer Support Cage, Micro Capsule Housing	Polypropylene
Sealing Method	Thermal Bonding

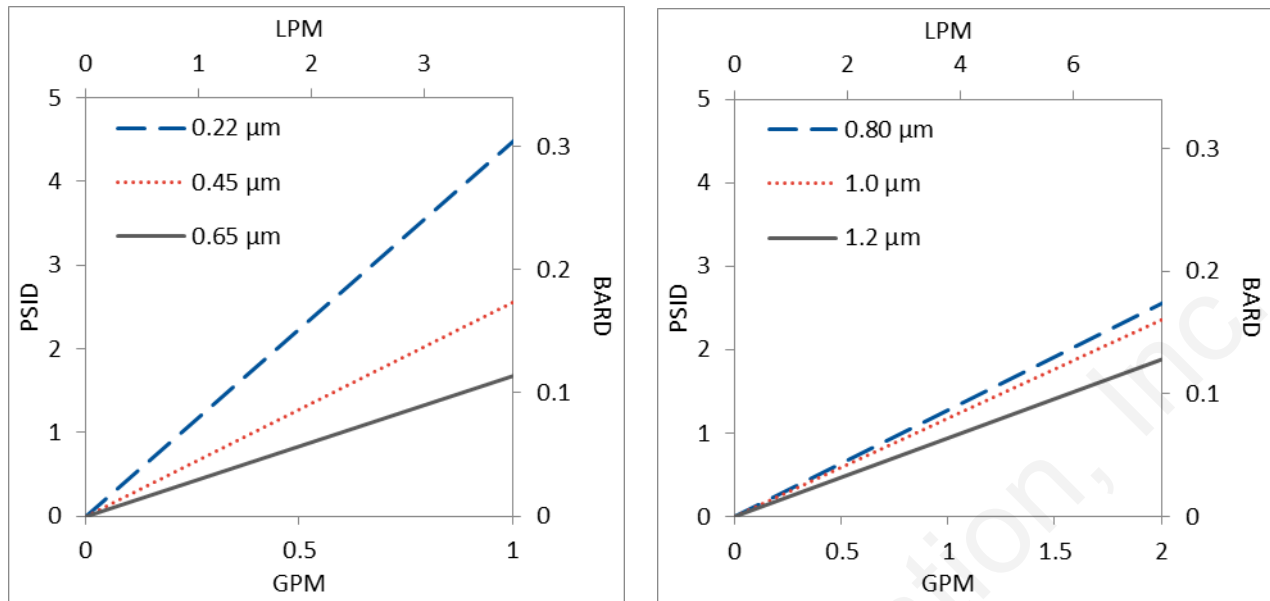
Non-Fiber Releasing

VPS 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.

Flow Rates for VPS Micro Capsules by Pore Size



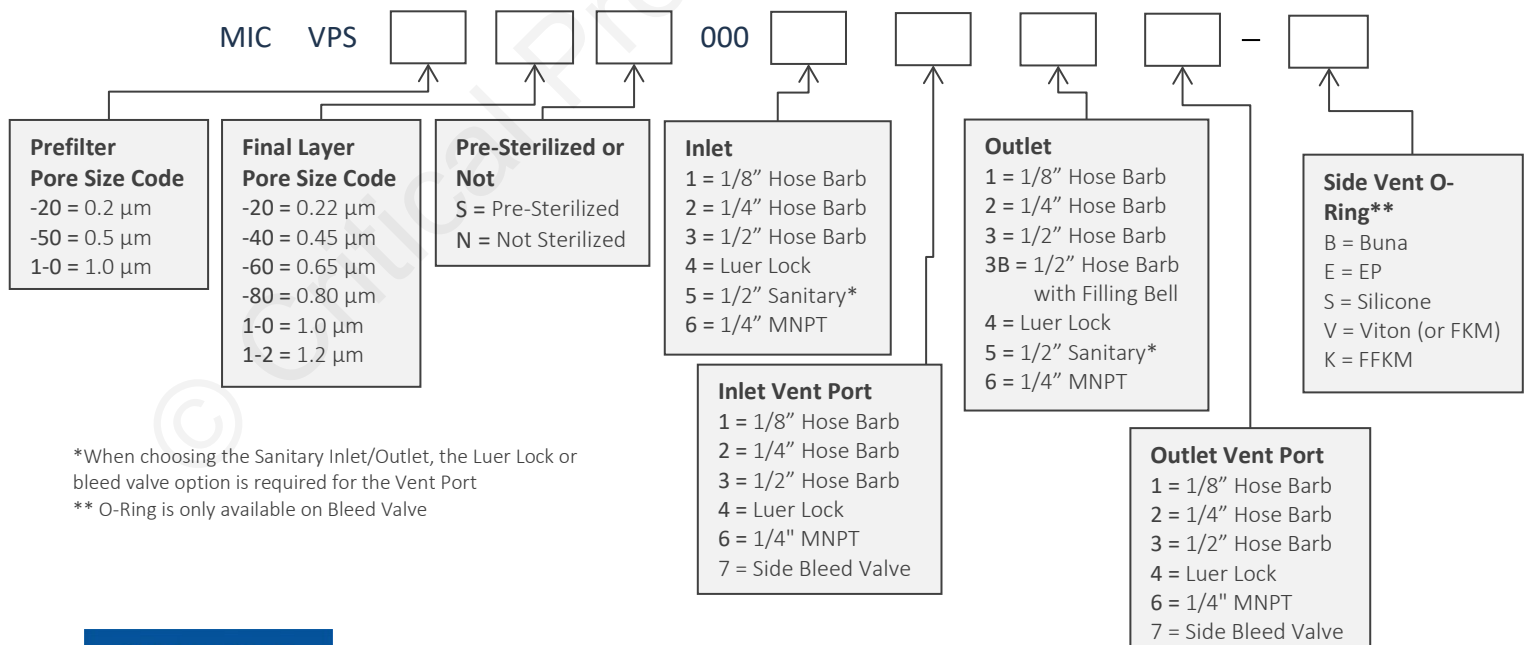
Flow rates for Micro Capsule filters are per filter. The test fluid is water at ambient temperature. Flows are tested using a Micro capsule filter with ½" Sanitary inlet and outlet ports. Rates will vary based on end configuration of the Micro capsule.

VPS 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



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Data Sheet VPS Micro DS Rev -