



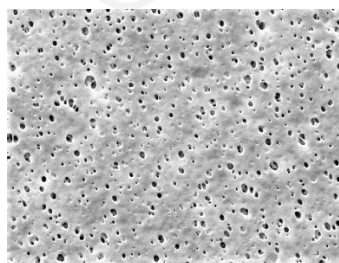
# GPS Micro Capsule Filters

PES Membrane

*GPS Micro Capsule filters are part of Critical Process Filtration's economical, general service product line that can be used to lower the total cost of filtration from simple to the most complex applications. Produced using the same quality materials and manufacturing excellence as our other product lines, you can be assured of their performance, dependability and scalability. While general service filters are not integrity tested or validated for retention, these highly efficient filters remove large amounts of contaminants early in the process to reduce the load on your expensive downstream filters. They are also useful as stand-alone clarifying or particle removal filters in less critical applications.*

GPS Micro Capsule filters are made with a single layer Polyethersulfone (PES) membrane. They are used for the filtration of aqueous fluids. Pore sizes range from 0.03 to 1.2  $\mu\text{m}$ . These hydrophilic filters have low binding characteristics, making them an ideal choice for filtering products with components that adsorb to filter media. GPS Micro Capsule filters deliver high flow and throughput.

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.



GPS Micro Capsule filters are recommended for:

- Process Water
- DI Water
- Cosmetics
- Inks and Dyes

Fine Particle Removal

Clarification & Prefiltration



## 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>	50 psid at 68 °F (3.45 bard at 20 °C)
<b>Reverse Differential Pressure</b>	40 psid at 68 °F (2.76 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, 5+ cycles
<b>Chemical Sanitization</b>	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.

## Construction Materials

<b>Filtration Media</b>	PES membrane
<b>Media Support</b>	Polypropylene
<b>End Caps, Center Core, Outer Support Cage, Micro Capsule Housing</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding

## Filtration Area (Nominal)

<b>Area</b>	0.575 ft <sup>2</sup>
	533 cm <sup>2</sup>

## Extractables

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

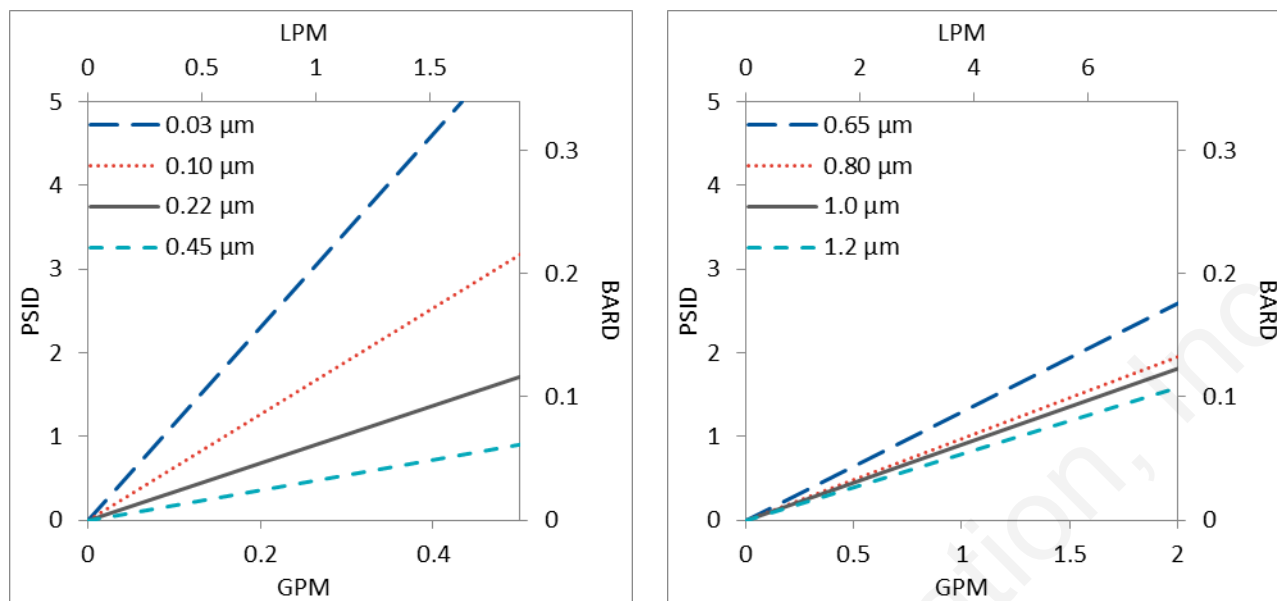
## Non-Fiber Releasing

The GPS 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 GPS 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  $\frac{1}{2}$ " Sanitary inlet and outlet ports. Rates will vary based on end configuration of the Micro capsule.

## GPS 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

MIC GPS  N 000      -

Pore Size Code	Inlet	Inlet Vent Port	Outlet	Outlet Vent Port	Side Vent O-Ring**
-03 = 0.03 $\mu\text{m}$	1 = 1/8" Hose Barb	1 = 1/8" Hose Barb	1 = 1/8" Hose Barb	1 = 1/8" Hose Barb	B = Buna
-10 = 0.10 $\mu\text{m}$	2 = 1/4" Hose Barb	2 = 1/4" Hose Barb	2 = 1/4" Hose Barb	2 = 1/4" Hose Barb	E = EP
-20 = 0.22 $\mu\text{m}$	3 = 1/2" Hose Barb	3 = 1/2" Hose Barb	3 = 1/2" Hose Barb	3 = 1/2" Hose Barb	S = Silicone
-40 = 0.45 $\mu\text{m}$	4 = Luer Lock	4 = Luer Lock	3B = 1/2" Hose Barb with Filling Bell	4 = Luer Lock	V = Viton (or FKM)
-60 = 0.65 $\mu\text{m}$	5 = 1/2" Sanitary*	6 = 1/4" MNPT	4 = Luer Lock	6 = 1/4" MNPT	K = FFKM
-80 = 0.80 $\mu\text{m}$	6 = 1/4" MNPT	7 = Side Bleed Valve	5 = 1/2" Sanitary*	7 = Side Bleed Valve	
1-0 = 1.0 $\mu\text{m}$			6 = 1/4" MNPT		
1-2 = 1.2 $\mu\text{m}$					

\*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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