EPM Capsule Filters

Polypropylene Membrane

CRITICAL PROCESS FILTRATION, INC.

Optimized for maximum filter life

Designed for sterilizing filtration of air and process gases

Final filtration of solvents, alcohols and other non-aqueous liquids

Applications

- Etchants
- Acids & Bases
- Solvent Filtration
- Non-aqueous Solutions
- Tank Vents
- Process Gases
- Compressed Air Filtration

Electronics grade EPM capsules are made of materials specifically chosen for their compatibility with chemicals and solvents. They have minimal extractables when exposed to those chemicals and solvents. Each capsule module is flushed until the rinse effluent reaches 18+ Megohm-cm and less than 3 ppb TOC. Each cartridge module is also individually tested to ensure integrity.

EPM capsules are used when high filter efficiency is critical to optimum process yield. Made with hydrophobic polypropylene membrane, the filters are designed for use with non-aqueous liquids, and process gases.

The capsule media surface area, filter core design, pleat configuration and pleat packing density are all optimized to provide increased life.

Electronics Grade

EPM Capsule Filters - Filtration Area

Media	Capsule Length				
	2″	5″	10″	20″	30″
Polypropylene Membrane	1.0 ft^2 (0.093m^2)	3.0 ft^2 (0.279m^2)	7.0 ft^2 (0.650m^2)	14.0 ft^2 (1.301m^2)	21.0 ft^2 (1.951m^2)

Flow Rate / Filtration Area

The following table represents typical water and air flow at a one psi (69 mbar) pressure differential across a single 2 inch capsule with 1.0 ft^2 (0.093 m^2) of media with 1/2″ FNPT ports. The liquid test fluid is water at ambient temperature. The gas test fluid is compressed air at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Air/Gas Flow Rates			Liquid Flow Rates		
µm Rating	0.10 µm	0.22 µm	**µm Rating**	0.10 µm	0.22 µm
SCFM	3.1	4.6	**GPM**	0.11	0.39
			LPM	0.42	1.48

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

Construction Materials

Housing	Polypropylene
Filtration Media	Polypropylene Membrane
Media Support	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
Outer Support Cage	Polypropylene
Sealing Method	Thermal Bonding

Maximum Operating Parameters

Liquid Operational Pressure	80 psi (5.5 bar) at 20 °C (68 °F)
Gases Operational Pressure	60 psi (4.1 bar) at 20 °C (68 °F)
Operating Temperature	43 °C (110 °F) at 30 psi (2.1 bar) in water
Forward Differential Pressure	50 psid (3.4 bard) at 20 °C (68 °F)
Reverse Differential Pressure	40 psid (2.7 bard) at 20 °C (68 °F)
Recommended Changeout Pressure	35 psid (2.4 bard)

Integrity Test Specifications

Pore Size	Test Pressure (psi)	Max Diffusion Rate (cc/min -water wetted membrane)				
		2"	5"	10"	20"	30"
0.10	48	4.3	12.9	30	60	90
0.22	35	4.3	12.9	30	60	90

Sanitization/Sterilization

Autoclave ..... 250° F (121° C), 30 min, 5+ cycles

Chemical Sanitization ..... Industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals.

Note ..... EPM capsules are not to be used in steam.

Extractables

The levels of extractables in aqueous extracts from E-grade capsule filters are below 3ppb of TOC after product rinse during manufacturing. E-grade filters typically exhibit very low levels of non-volatile residues during startup.

Ordering Information

Capsule order number example: Electronics Grade Polypropylene Membrane, 0.10 Micron Rating, Non-Sterile, 10" Length, Sanitary Inlet, Sanitary Outlet = CPEPM-10N0001FF.

Quality Assurance and Standards

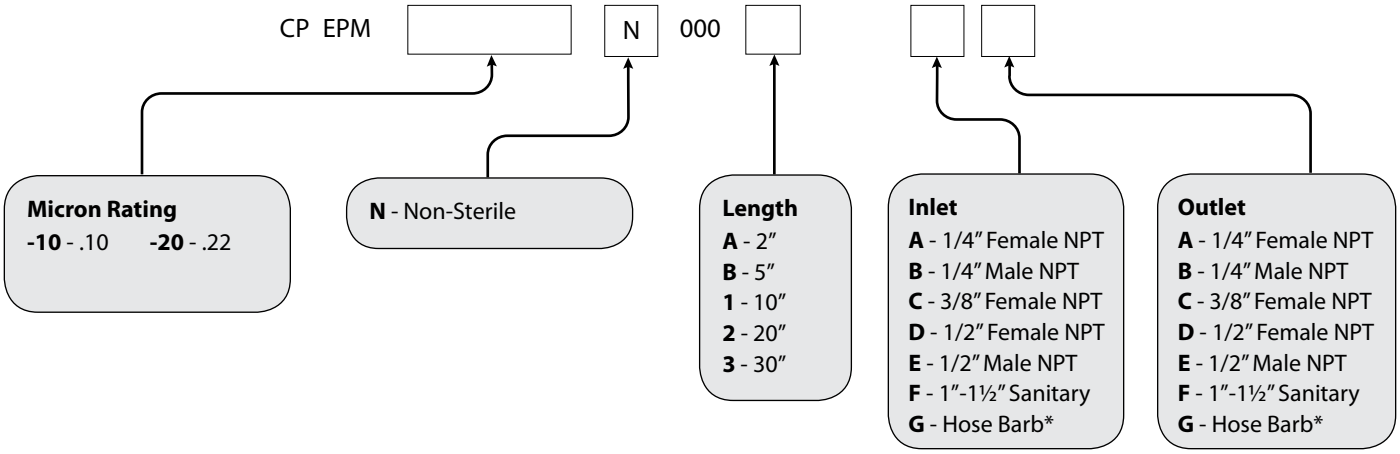
Critical Process Filtration uses state of the art computer controlled equipment to consistently produce high quality products as well as significantly reduce hand operations that can compromise quality. All manufacturing and testing is continuously monitored in real time so that data can be quickly and easily analyzed to facilitate improvements in both quality and cost.

The Critical Process Filtration manufacturing and quality systems meet rigorous ISO 9001:2008 standards. Each operation, including assembly, testing, cleaning, drying and packaging, is done in an appropriately rated clean room. Manufacturing is controlled using a sophisticated manufacturing system that networks work stations, manufacturing centers and inspection points. During the manufacturing and inspection processes, data is collected in real time to allow continuous quality monitoring and full traceability of all materials and processes.

Each capsule assembly is integrity tested before release.

Total Performance

Critical Process Filtration, Inc. is a vertically integrated manufacturer of filtration products to industries in which filtration is considered a critical part of the manufacturing process. We supply a complete line of products and services to help you cost effectively satisfy all your filtration requirements from a single source.



Hose Barb Diameter Ranges*

	Minimum	Maximum
Outer Diameters	11/32" (8.6mm)	9/16" (14.0mm)
Inner Diameters	5/32" (4.0mm)	13/32" (10.5mm)

Request a QUOTE from your area representative

Critical Process Filtration, Inc.
One Chestnut Street • Nashua, NH 03060
Tel: 603.880.4420 • Fax: 603.880.4536
criticalprocess.com • sales@criticalprocess.com