



# GNM Filters

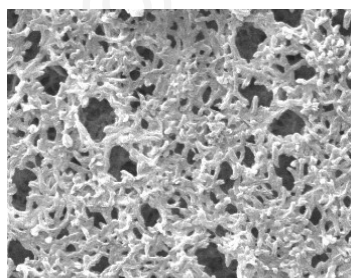
Nylon 6,6 Membrane



*GNM 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.*

GNM cartridge and capsule filters consist of a single layer, Nylon 6,6 membrane used for filtering aqueous and non-aqueous liquids. Pore sizes range from 0.10 to 1.2  $\mu\text{m}$ . Hydrophilic GNM filters offer broad chemical compatibility and 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.



GNM filters are recommended for filtering:

- Process Water
- Chemicals
- DI Water
- Solvents
- Inks and Dyes

## Fine Particle Removal

## Clarification & Prefiltration



**CARTRIDGES – Nominal Dimensions**  
Length: 5 to 40 in. (12.7 to 101.6 cm)  
Outside Diameter: 2.75 in. (7.0 cm)



**CAPSULES – Nominal Dimensions**  
Length: 2 to 30 in. (5.1 to 76.2 cm)  
Outside Diameter: 3.50 in. (8.9 cm)

## Maximum Operating Parameters

	CARTRIDGES	CAPSULES
<b>Liquid Operational Pressure</b>	N/A	80 psi at 68 °F (5.52 bard at 20 °C)
<b>Gases Operational Pressure</b>	N/A	60 psi at 68 °F (4.14 bar at 20 °C)
<b>Operating Temperature (water)</b>	180 °F at 30 psid (82 °C at 2.07 bard)	110 °F at 30 psid (43 °C at 2.07 bard)
<b>Forward Differential Pressure</b>	80 psid at 68 °F (5.52 bard at 20 °C) (Liquid and Gas)	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)	50 psid at 68 °F (3.45 bard at 20 °C)
<b>Recommended Changeout Pressure</b>	35 psid (2.41 bard)	35 psid (2.41 bard)

## Sanitization & Sterilization

<b>Filtered Hot Water*</b>	90 °C (194 °F), 30 minutes, multiple cycles, max 3 psid forward flow	N/A
<b>Inline Steam*</b>	275 °F (135 °C), 30 min, 25+ cycles	N/A
<b>Autoclave*</b>	250 °F (121 °C), 30 min, 25+ cycles	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.	

\*Cartridge Filters – For all elevated temperature procedures above, a stainless-steel support ring is required.

## Filtration Area (Nominal)

	CAPSULES	CARTRIDGES AND CAPSULES				CARTRIDGES
Length	2"	5"	10"	20"	30"	40"
	5.08cm	12.7cm	25.4cm	50.8cm	76.2cm	101.6cm
Area	1.2 ft <sup>2</sup>	3.3 ft <sup>2</sup>	7.0 ft <sup>2</sup>	14.0 ft <sup>2</sup>	21.0 ft <sup>2</sup>	28.0 ft <sup>2</sup>
	0.11m <sup>2</sup>	0.31m <sup>2</sup>	0.65m <sup>2</sup>	1.30m <sup>2</sup>	1.95m <sup>2</sup>	2.60m <sup>2</sup>

## Construction Materials

<b>Filtration Media</b>	Nylon 6,6 Membrane
<b>Media Support</b>	Polypropylene
<b>End Caps, Center Core, Outer Support Cage, Capsule Housing</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding
<b>O-Rings/Gaskets Cartridges only</b>	Buna, Viton® (or FKM), EPDM, Silicone, FEP Encapsulated Silicone, FEP Encapsulated Viton (or FKM)

## Extractables

GNM filters typically exhibit low levels of non-volatile residues.

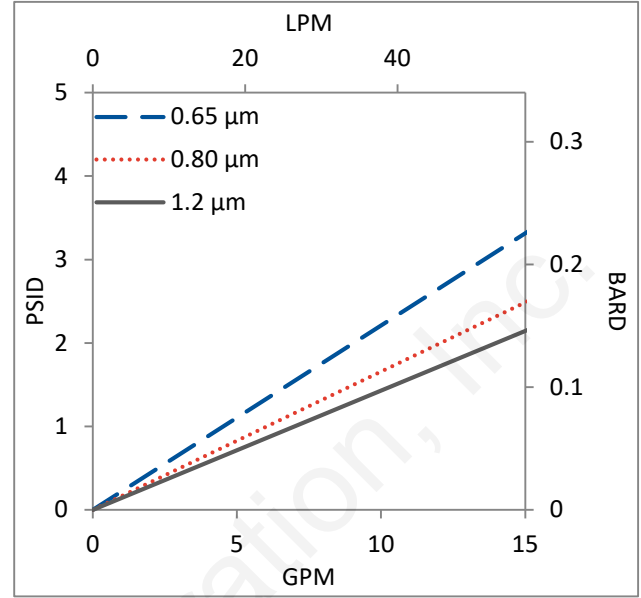
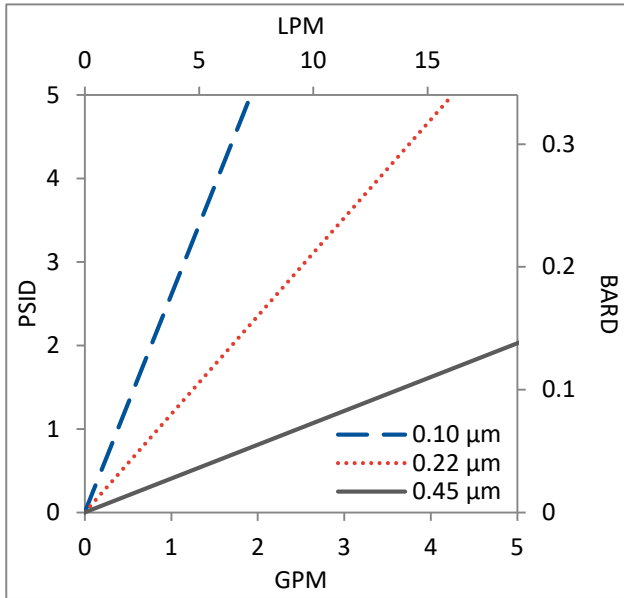
## Non-Fiber Releasing

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

## FDA and EC Compliance

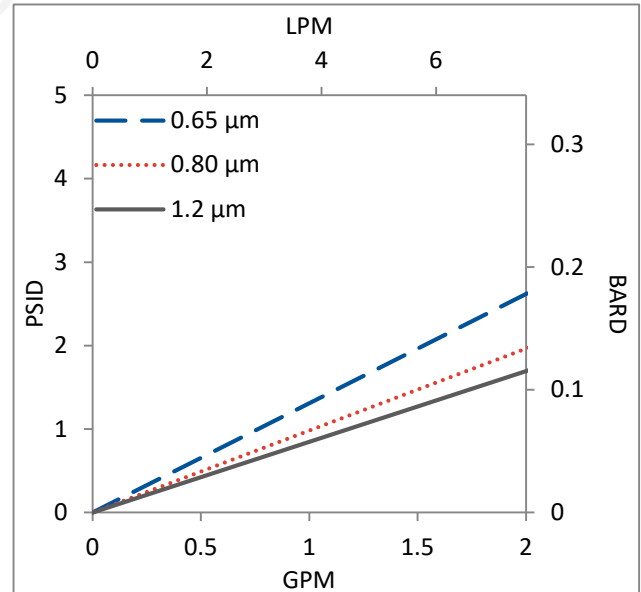
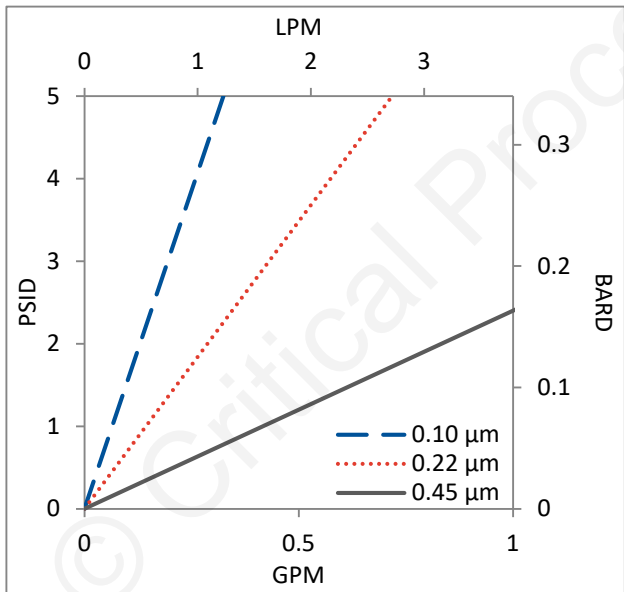
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission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

## Flow Rates for GNM Cartridges by Pore Size



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

## Flow Rates for GNM Capsules by Pore Size



Flow rates for Capsule filters are tested using a 2" capsule filter with 1" sanitary inlet and outlet ports. The test fluid is water at ambient temperature. Flow rates for larger capsules will scale with filtration area. Rates will vary based on end configuration of the capsule.

## GNM Filters Ordering Information

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](#).

### Cartridge Filters

GNM   000

<b>Pore Size Code</b> -10 = 0.10 µm -20 = 0.22 µm -40 = 0.45 µm -60 = 0.65 µm -80 = 0.80 µm 1-2 = 1.2 µm	<b>SS Ring</b> S = Ring N = No Ring	<b>Length</b> 05 = 5 in. (12.7 cm) 97 = 9.75 in. (24.8 cm) 01 = 10 in. (25.4 cm) 02 = 20 in. (50.8 cm) 03 = 30 in. (76.2 cm) 04 = 40 in. (101.6 cm)	<b>O-Ring/Gasket Code</b> S = Silicone B = Buna V = Viton (or FKM) T = FEP Encapsulated Viton (or FKM) E = EP R = FEP Encapsulated Silicone	<b>End Cap Code*</b> 0 = Flat Gasket, DOE 1 = Flat Gasket/Plug 2 = 2-222 O-ring/Plug 3 = 213/119 Internal O-ring DOE 4 = 213/119 Internal O-ring/Plug 5 = 2-222 O-ring/Flat 6 = 2-226 O-ring/Flat 7 = 020 O-ring/Plug 8 = 2-222 O-ring/Spear 9 = 2-226 O-ring/Spear 21 = 2-223 O-ring/Flat 22 = 2-223 O-ring/Spear 23 = 2-222 O-ring 3 Tab/Flat 24 = 2-222 O-ring 3 Tab/Spear 25 = Short 2-222/Plug
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[\\*Additional End Configurations Available](#)

### Capsule Filters

CP GNM   000    -

<b>Pore Size Code</b> -10 = 0.10 µm -20 = 0.22 µm -40 = 0.45 µm -60 = 0.65 µm -80 = 0.80 µm 1-2 = 1.2 µm	<b>Pre-Sterilized or Not</b> S = Pre-Sterilized G = Gamma Stable N = Not Sterilized	<b>Length</b> A = 2" B = 5" 1 = 10" 2 = 20" 3 = 30"	<b>Inlet</b> A = 1/4" Female NPT B = 1/4" Male NPT C = 3/8" Female NPT D = 1/2" Female NPT E = 1/2" Male NPT F = 1" Sanitary G = Hose Barb* H = 1 1/2" Sanitary with side vent I = 1/2" Single Stepped Barb with side vent J = 3/4" Single Step Barb with Side Vent Y = 3/8" Compression (JACO®) (Top Luer lock vent only) Z = 6mm Quick Disconnect (Top Luer lock vent only)	<b>Outlet</b> A = 1/4" Female NPT B = 1/4" Male NPT C = 3/8" Female NPT D = 1/2" Female NPT E = 1/2" Male NPT F = 1" Sanitary G = Hose Barb* H = 1 1/2" Sanitary with side vent I = 1/2" Single Stepped Barb with side vent IB = 1/2" Single Stepped Barb with filling bell and side vent J = 3/4" Single Step Barb with Side Vent Y = 3/8" Compression (JACO®) (Top Luer lock vent only) Z = 6mm Quick Disconnect (Top Luer lock vent only)	<b>Side Vent Options</b> 1 = Luer Lock 2 = 1/8" Bleed Valve 3 = 1/4" Bleed Valve  <b>O-Ring</b> (Bleed Valves Only) S = Silicone E = EP V = Viton B = Buna K = FFKM
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\*Fits hoses/tubes with inner diameter 11/32 to 9/16 inches



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Data Sheet GNMD5 Rev C