

# NSPD Filters

Nano-Spun Polypropylene Depth Media

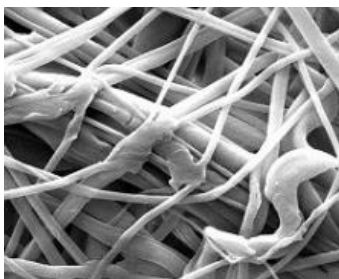


*NSPD filters are part of Critical Process Filtration's economical, general service product line that can be used to lower the total cost of filtration from simple to the most complex applications. Produced using the same quality materials and manufacturing excellence as our other product lines, you 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.*

NSPD cartridge and capsule filters are made with Nano-spun Polypropylene depth media, which is the laying down of graded density fibers on a spinning core and used when filtering fluids with high contaminant loading. Pore sizes range from 0.5 to 100 µm.

The NSPD products are engineered to hold large amounts of contaminants and still provide 99% retention at the rated pore size. NSPD filters protect downstream membrane filters and improve process efficiency.

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.



NSPD filters are recommended for clarification & prefiltration of:

- High Purity Chemicals
- Fermentation Broths
- Wine, Beer, Juices
- Buffers & Biologicals
- Container Wash Solutions
- Inks & Dyes
- CMP Slurries
- Water Purification

## Clarification & Prefiltration

### Particle Filtration



**CARTRIDGES – Nominal Dimensions**  
Length: 5 to 40 in. (12.7 to 101.6 cm)  
Outside Diameter: 2.50 in. (6.35 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>	140 °F at 30 psid (60 °C at 2.07 bard)	140 °F at 30 psid (60 °C at 2.07 bard)
<b>Forward 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>Reverse Differential Pressure</b>	20 psid at 68 °F (1.38 bard at 20 °C)	20 psid at 68 °F (1.38 bard at 20 °C)
<b>Recommended Changeout Pressure</b>	35 psid (2.41 bard)	35 psid (2.41 bard)

## Sanitization & Sterilization

<b>Chemical Sanitization</b>	Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.
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## Construction Materials

<b>Filtration Media</b>	Melt-Blown Polypropylene Depth Media
<b>End Caps, 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)

## Endotoxins

The levels of bacterial endotoxins in aqueous extracts from NSPD filters are below current USP limits as specified for water for injection.

## Extractables

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

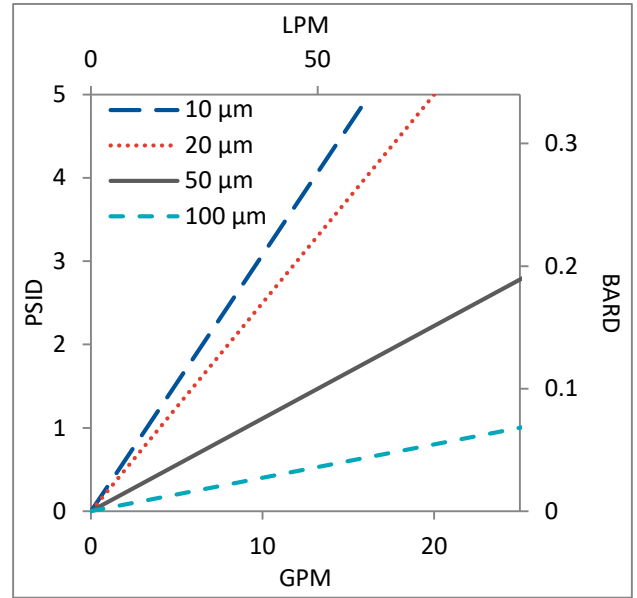
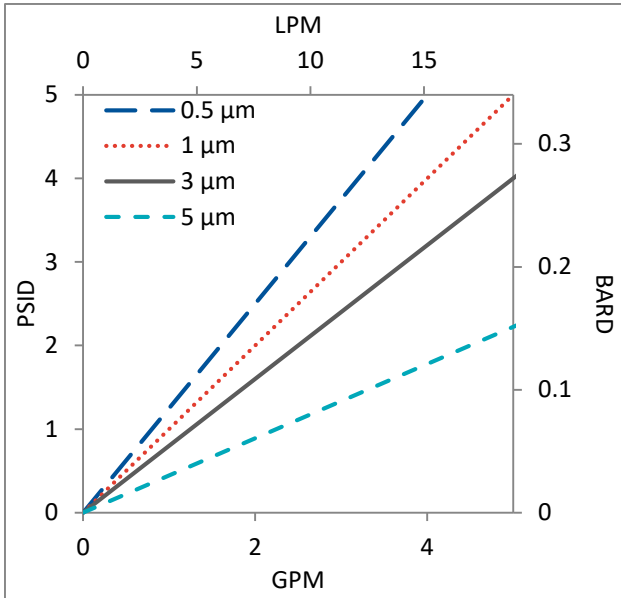
## Non-Fiber Releasing

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

## FDA Compliance

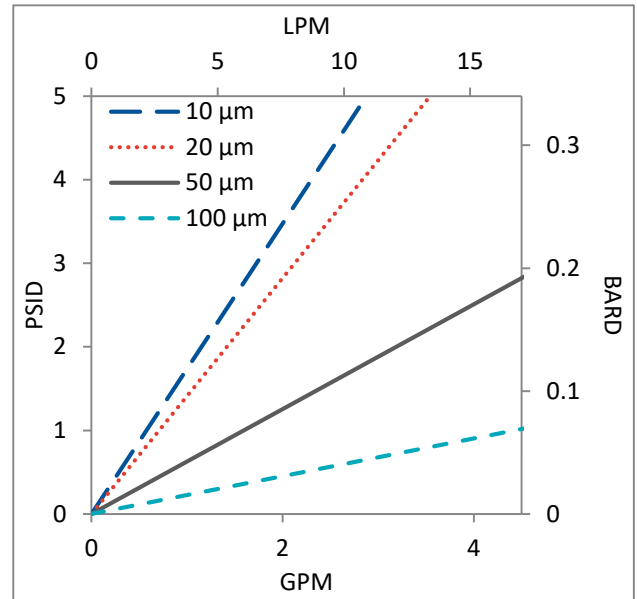
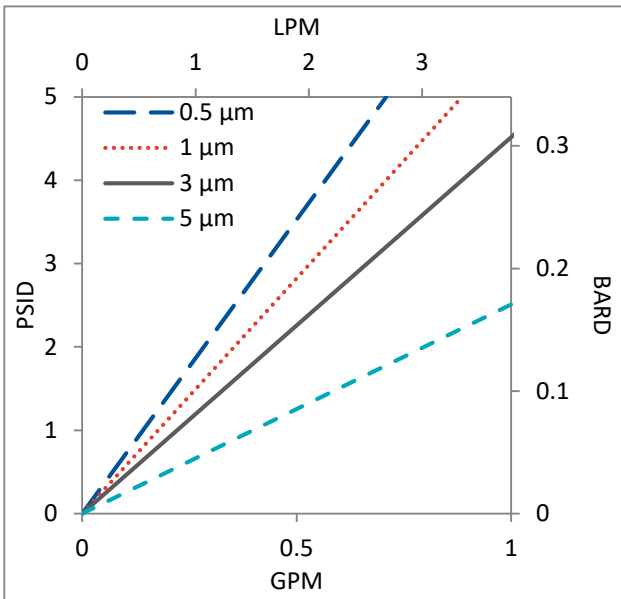
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable.

## Flow Rates for NSPD 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 NSPD Capsules by Pore Size



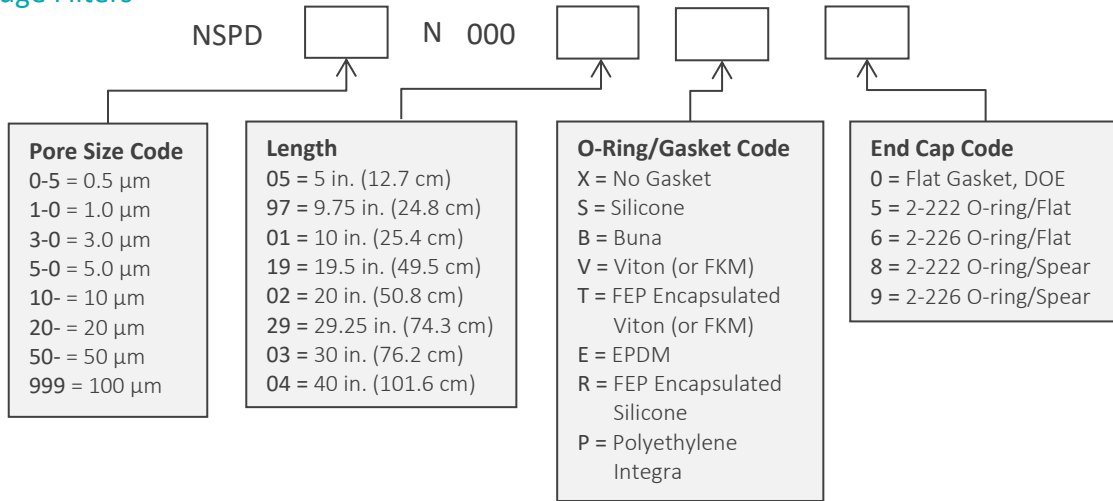
Flow rates for Capsule filters are tested using a 2" capsule filter with 1" sanitary inlet and outlet ports. The test fluid is water at ambient temperature. Flow rates for larger capsules will scale with filtration area. Rates will vary based on end configuration of the capsule.

## NSPD Filters Ordering Information

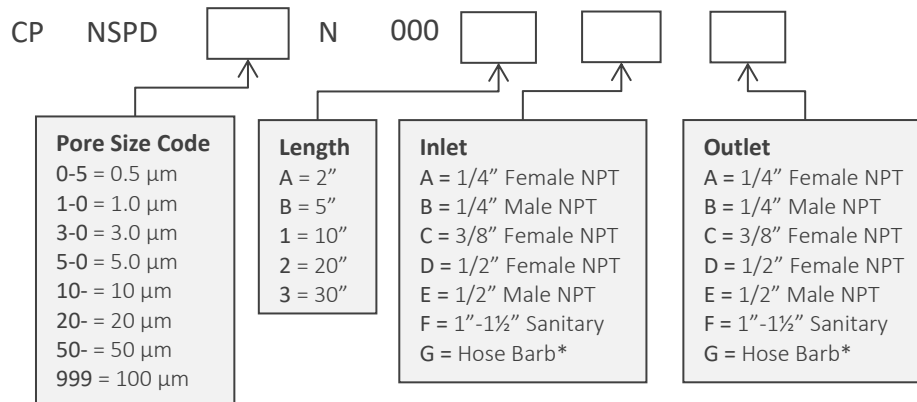
All Critical Process filters are configurable to meet customer specifications.  
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:  
call (603) 880-4420 or [contact us here](#).

### Cartridge Filters



### Capsule Filters



\*Fits hoses/tubes with inner diameter 11/32 to 9/16 inches

### Housings

CPF offers Model CSH sanitary housings and Model CIH industrial housings in Single-Round (Inline and T-Style) and Multi-Round configurations. Contact us or visit our website for more information.



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