

# NSPD Filters

Nano-Spun Polypropylene Depth Media



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. They are general service grade filters providing an economical solution when filtering fluids with high contaminant loading. Pore sizes range from 0.5 to 50  $\mu\text{m}$ .

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.

## Clarification & Prefiltration



**CARTRIDGES – Nominal Dimensions**  
Length: 5 to 40 in. (12.7 to 101.6 cm)  
Outside Diameter: 2.50 in. (6.35 cm)



NSPD filters are recommended for clarification & prefiltration in:

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



**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 (5.51 bard at 20 °C)
<b>Gases Operational Pressure</b>	N/A	60 psi at 68 °F (4.13 bar at 20 °C)
<b>Operating Temperature (water)</b>	140 °F at 30 psid (60 °C at 2.1 bard)	140 °F at 30 psid (60 °C at 2.1 bard)
<b>Forward Differential Pressure</b>	50 psid at 68 °F (3.4 bard at 20 °C)	50 psid at 68 °F (3.4 bard at 20 °C)
<b>Reverse Differential Pressure</b>	20 psid at 68 °F (1.4 bard at 20 °C)	20 psid at 68 °F (1.4 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.
------------------------------	--

## 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)
<b>Filtration Media</b>	Melt-Blown Polypropylene Depth Media

## 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.

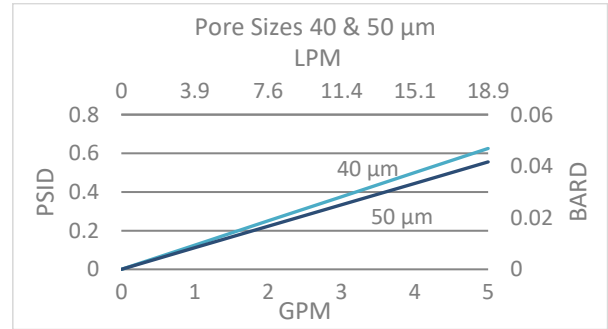
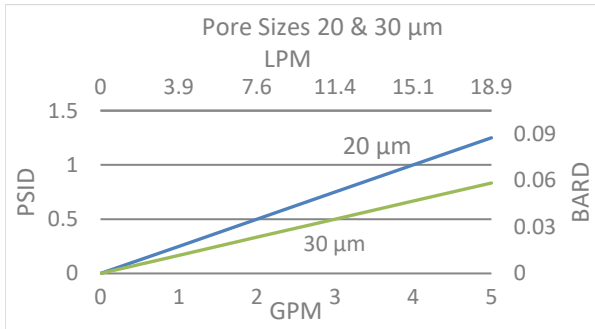
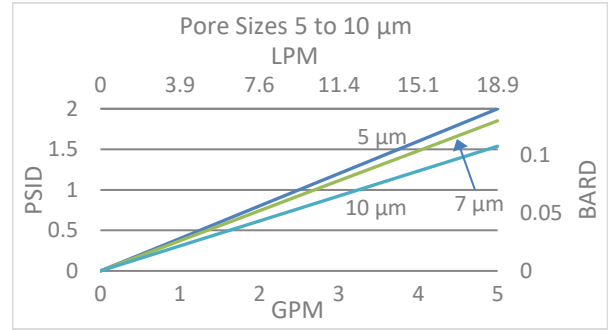
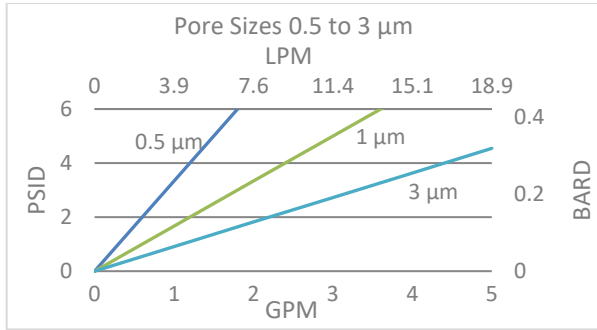
## Non-Fiber Releasing

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

## FDA Compliance

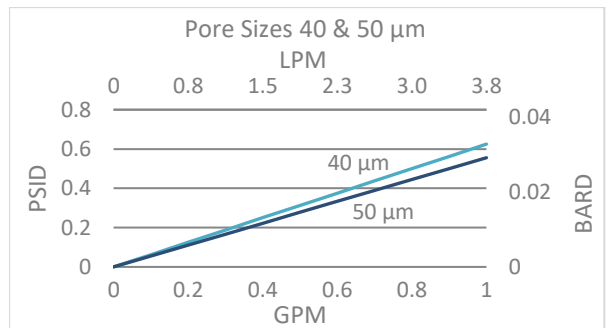
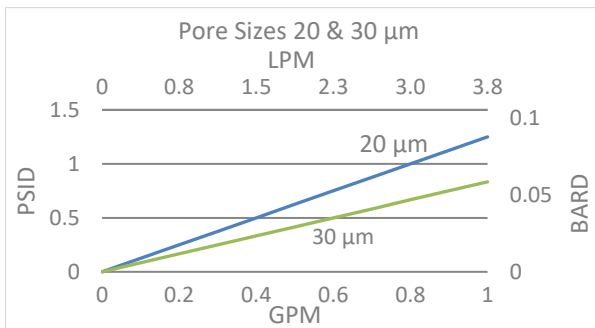
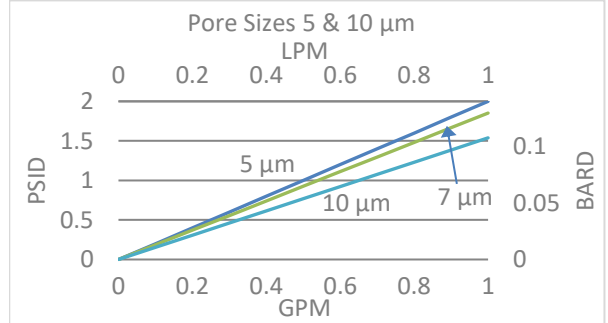
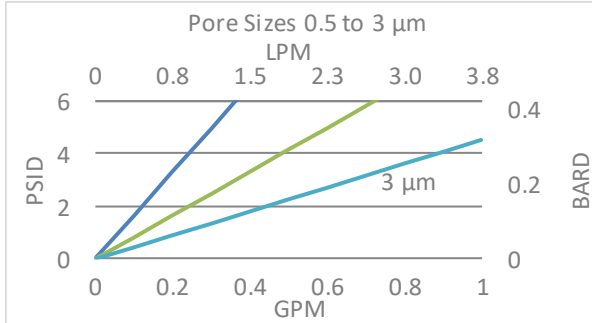
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable.

## Flow Rates for NSPD Cartridges



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

## Flow Rates for NSPD Capsules



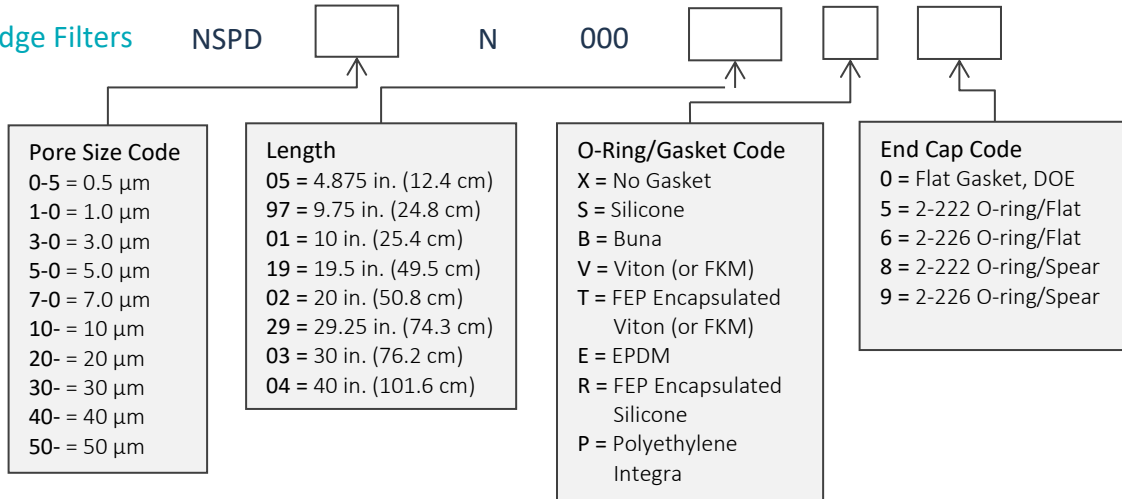
Flow rates for Capsule filters are per 2" module length. Flows are tested using a 2" capsule filter with 1/2" FNPT inlet and outlet ports. The test fluid is water at ambient temperature. Rates will vary based on end configuration of the capsule.

## NSPD Filters Ordering Information

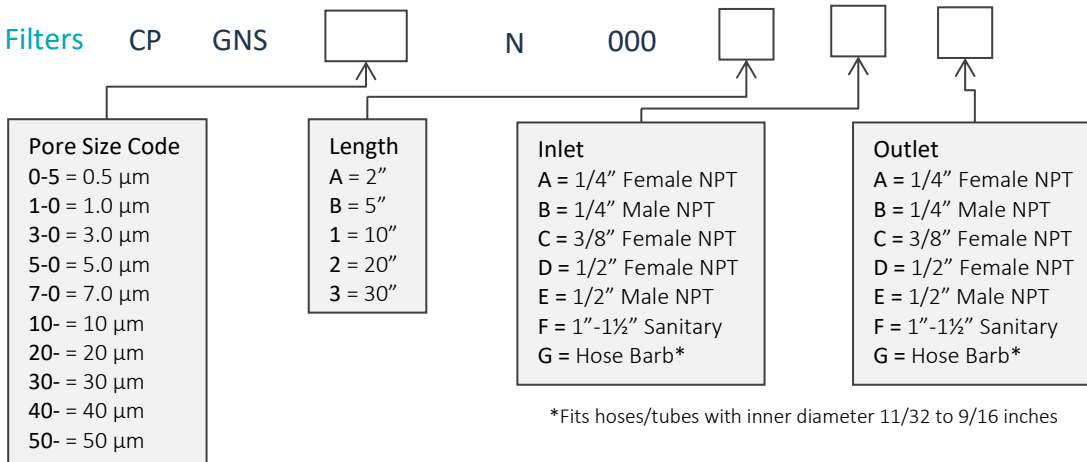
All Critical Process filters are configurable to meet customer specifications.  
Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:  
call (603) 880-4220 Ext. 106, or send an email to [sales@criticalprocess.com](mailto:sales@criticalprocess.com)

### Cartridge Filters



### Capsule Filters



### 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.



One Chestnut Street  
Nashua, NH 03060  
603.880.4420  
FAX: 603.880.4536  
CriticalProcess.com

The information contained herein is subject to change without notice. The Critical Process Filtration logo is a trademark of Critical Process Filtration, Inc. Viton is a trademark of DuPont Performance Elastomers L.L.C.  
© 1998-2019 Critical Process Filtration, Inc. • All Rights Reserved

Data Sheet NSPDDS0919 Rev-