

NanoSHIELD™ SDC Filter Capsules

Low Hold-Up Volumes and Superior Defect Reduction from Advanced Chemicals

NanoSHIELD SDC filter capsules deliver the highest flow rates and lowest hold-up volumes for advanced photoresists and ancillary chemicals applications. Utilizing Hollow Fiber Technology (HFT), NanoSHIELD filters are able to provide superior flow and minimal pressure drop, while maintaining the highest level of filter efficiency in a compact design.



Built to Perform

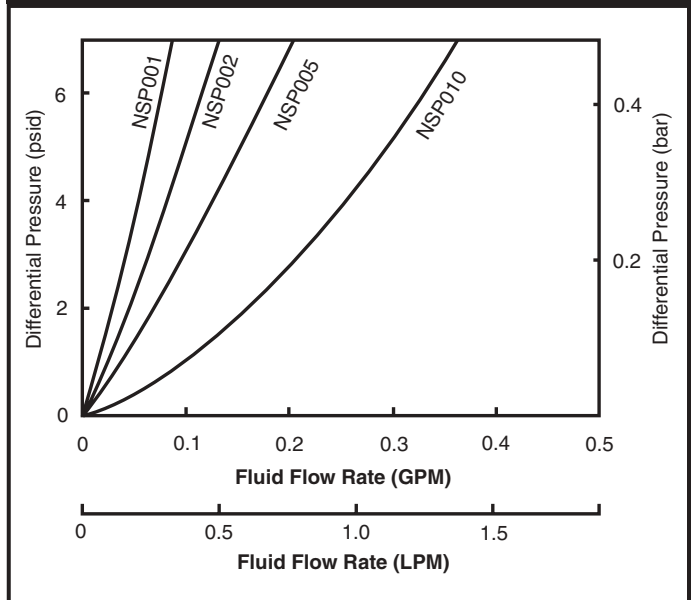
The hollow fiber polypropylene membrane in an all polyethylene construction provides low extractables and excellent chemical compatibility with most photo-chemicals. In addition, all filters are critically cleaned, integrity tested, and rinsed with high purity water to provide fast start-up times right out of the box. The small compact design of NanoSHIELD SDC filter capsules make them ideally suited for applications requiring low hold-up volume and high particle retention at 0.01, 0.02, 0.05, and 0.1 μm .

NanoSHIELD SDC filter capsules contain the same filter media as full size NanoSHIELD filter cartridges and capsules, ensuring full scale-up throughout your development process.

Applications

■ 193nm Photoresists	■ Alcohols
■ ARC, BARC, TARC	■ Bases
■ Etchants / Strippers	■ Developers
■ Polyimide	■ Solvents

Typical Flow vs Differential Pressure (1cps @ 25°C)



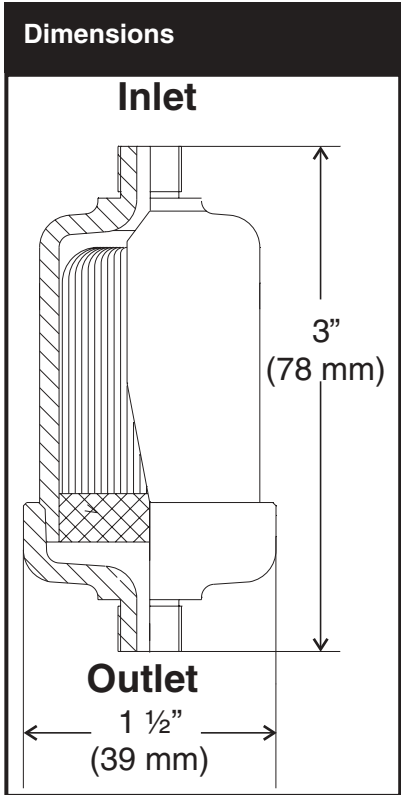
Features

Benefits

<ul style="list-style-type: none"> ■ Hollow Fiber Technology 	<ul style="list-style-type: none"> ■ Increased surface area (up to 3 times) results in higher flow rates as compared to equivalent size pleated capsules ■ Provides both lower operating and differential pressure to minimize outgassing and micro-bubble formation ■ Minimal waste of expensive chemicals due to extremely low hold-up volume ■ Increased lifetime, throughput, and overall equipment effectiveness (OEE)
<ul style="list-style-type: none"> ■ Polypropylene and Polyethylene Construction 	<ul style="list-style-type: none"> ■ Excellent chemical resistance to photoresists and ancillary chemicals ■ No IPA pre-wetting and system flushing required – eliminates a potential source of contaminations and chemical interaction, while reducing downtime
<ul style="list-style-type: none"> ■ 0.01 μm and 0.02 μm Retention Ratings 	<ul style="list-style-type: none"> ■ Superior removal of particles, gels, and micro-bubbles ■ Reduced micro-bridge and wafer level defects for 193nm photoresists
<ul style="list-style-type: none"> ■ Quality Manufacturing 	<ul style="list-style-type: none"> ■ Manufactured in a cleanroom to reduce particle adders and extractables ■ All filters are critically cleaned and integrity tested to ensure process repeatability

NEW

Specifications	
Membrane Material	Hollow Fiber Polypropylene
Capsule Body	Polyethylene
Potting Material	Polyethylene
Filtration Surface Area	148.8 in ² (960 cm ²)
Maximum Operating Pressure	58 psig @ 77°F (4 bar @ 25°C)
Maximum Operating Temperature	104°F (40°C)
Absolute Removal Ratings (µm)	0.01, 0.02, 0.05, and 0.1
Maximum Differential Pressure	28 psid @ 77°F (1.9 bar @ 25°C)
Filter Capsule Integrity	100% Tested



NanoSHIELD™ SDC Filter Capsule Ordering Guide

Media	Removal Rating	Configuration	Length	Fitting Connection
NSP	001 – 0.01 µm 002 – 0.02 µm 005 – 0.05 µm 010 – 0.1 µm	N	20 – 2"	J – 1/8" NPT

Example – A 0.01 micron NanoSHIELD SDC Capsule with 1/8" NPT fittings would be NSP001N20J

WARRANTY

Seller warrants its equipment against defects in workmanship and material for a period of 12 months from date of shipment from the factory under normal use and service and otherwise when such equipment is used in accordance with instructions furnished by Seller and for purposes disclosed in writing at the time of purchase, if any. Any unauthorized alteration or modification of the equipment by Buyer will void this warranty. Seller's liability under this warranty shall be limited to the replacement or repair, F.O.B. point of manufacture, of any defective equipment or part which, having been returned to the factory, transportation charges prepaid, has been inspected and determined by the Seller to be defective. THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR USE, OR ANY OTHER MATTER. Under no circumstances shall Seller be liable to Buyer or any third party for any loss of profits or other direct or indirect costs, expenses, losses or consequential damages arising out of or as a result of any defects in or failure of its products or any part or parts thereof or arising out of or as a result of parts or components incorporated in Seller's equipment but not supplied by the Seller.

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