



The PureFlo® PES filter capsule in its all-polypropylene construction provides excellent chemical compatibility and superior flow per surface area as compared to other membrane capsules. PureFlo® PES Filter Capsules have been specially designed for sterilizing in biopharmaceutical applications. Its hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is low protein-binding.

The capsules were designed for simple and efficient filtration of small volumes used in low-flow application, laboratory, and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. PureFlo PES filter capsules are well-suited for pharmaceutical applications where superior flow and bacterial retention is required. The capsule can be ordered pre-sterilized.



## **SPECIFICATIONS**

### **Regulatory Compliance**

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

### **Bacterial Retention**

Complete retention of  $\geq 10^7$  organisms/cm<sup>2</sup> of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-83). Validation Guide upon request.

### **Autoclavable & Sanitizable**

Capsules can be autoclaved up to 25 times at 125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents such as hot water at 90°C for a limited time (dependent on time and temperature).

### **Water Bubble Point Specification**

0.1um : 23psi, 0.16 MPA (IPA)  
0.2um : 47psi, 0.32 MPa

### **Bacterial Endotoxin**

Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.

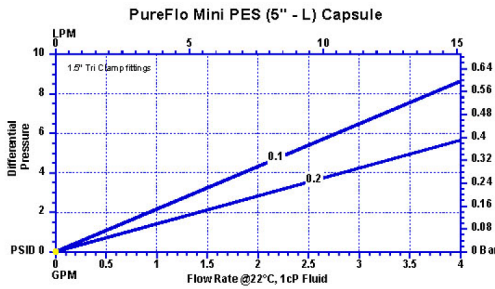
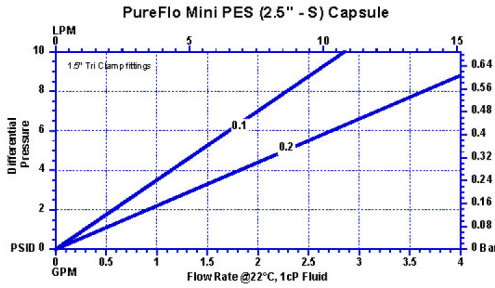
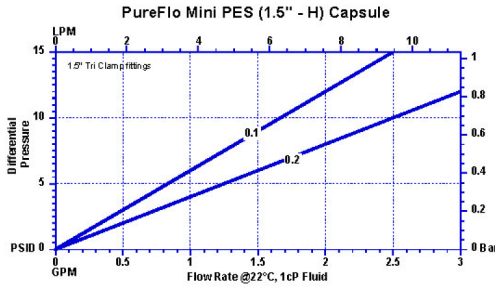
<b>Applications</b>	
Culture Media	Fermentation Broths
Serums	SVP (Small volume parenterals)
Vaccines	Product Sterilization
Reagents & Buffers	Biologics
Antibiotics	Beverages
WFI-POU	Scale-up processes

<b>Features</b>	<b>Benefits</b>
<ul style="list-style-type: none"> <li>■ Hydrophilic PES Membrane</li> </ul>	<ul style="list-style-type: none"> <li>■ Inherently hydrophilic for cleaner filtrates</li> <li>■ High flow rate reduces processing time</li> <li>■ Low protein-binding membrane maximizing yields</li> <li>■ Biologically inert membrane</li> <li>■ Bacterial retentive to produce sterile solutions</li> </ul>
<ul style="list-style-type: none"> <li>■ Small, Compact Design</li> </ul>	<ul style="list-style-type: none"> <li>■ Simple, quick, and efficient filtration</li> <li>■ Low hold-up volume reduces product waste</li> </ul>
<ul style="list-style-type: none"> <li>■ Low Filter Extractables</li> </ul>	<ul style="list-style-type: none"> <li>■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness</li> <li>■ All capsules are rinsed with pyrogen-free water</li> </ul>



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Note - Graphs based on Sanitary fittings.

## Materials of Construction

Membrane: Hydrophilic Polyethersulfone  
 Membrane Supports: Polypropylene, or PET option  
 Cage, Core, End Caps: Polypropylene, or Polyethylene option

## Fitting Connections

NPT, Sanitary Flange, Hose Barb, Coupling  
 Vent/Drain - Luer Lock, Plug, Bleed Valve

## Dimensions (TC fittings)

Length: 1.5 in (128 mm)  
 Length: 2.5 in (155 mm)  
 Length: 5.0 in (210 mm)  
 Length: 10 in (340mm)  
 Diameter: 2.75 in (70 mm)

## Effective Filtration Area

1.5 in - 0.77 ft<sup>2</sup> (720 cm<sup>2</sup>)  
 2.5 in - 1.48 ft<sup>2</sup> (1380 cm<sup>2</sup>)  
 5.0 in - 2.8 ft<sup>2</sup> (2600 cm<sup>2</sup>)  
 10 in - 5.6 ft<sup>2</sup> (5200 cm<sup>2</sup>)

## Operating Conditions

Maximum Forward Differential Pressure:  
 73 psid (5.0 bar) at 20°C  
 36 psid (2.5 bar) at 50°C  
 17 psid (1.2 bar) at 80°C  
 Maximum Reverse Differential Pressure:  
 44 psid (3.0 bar) at 20°C  
 Maximum Operating Temperature: 80°C

## PureFlo PES Filter Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Vent/Drain - Valve O-ring Material	Option
SK 70mm Diameter Capsule	L = Female Luer Lock	S = PES	004 = 0.04um	H = 1.5"	1H = 1/8" Hose barbs	1H = 1/8" Hose barbs	Blank = For Luer lock or Plug Blank = Silicone 9 = EPDM 8 = Buna N 7 = Fluoro-Elastomers	Blank = Polypro construction -PH = Pharm a Grade -E = Polyethylene Shell -GP = Gamma stable polypropylene shell -NY = Nylon Construction -FB = Filling bell -ETO = Ethylene oxide -NI = No vent or drain inlet fitting -NO = NO vent or drain Outlet fitting -G(pore Size) = Glass Fiber PreFilter -P(pore Size) = PolyPro Media PreFilter -S(pore Size) = PES PreFilter
	P = M8 Threaded Plug - Limited options		010 = 0.1um	S = 2.5"	1NF = 1/8" FNPT	1NF = 1/8" FNPT		
	V = Bleed Valve	020 = 0.2um	050 = 0.45um	L = 5"	1QF = 1/8" Female Quick Coupling with Metal latch	1QF = 1/8" Female Quick Coupling with Metal latch		
	N = No vent or drain fittings	065 = 0.65um	080 = 0.8um	K = 10"	2H = 1/4" to 1/2" Hose barbs	2H = 1/4" to 1/2" Hose barbs		
		120 = 1.2um			2HS = 1/4" to 3/8" Hose barbs	2HS = 1/4" to 3/8" Hose barbs		
					2LF = Large Female Luer Lock fitting	2LF = Large Female Luer Lock fitting		
					2N = 1/4" MNPT	2N = 1/4" MNPT		
					2NF = 1/4" FNPT	2NF = 1/4" FNPT		
					2Q = 1/4" Male Quick Coupling for Metal latch	2Q = 1/4" Male Quick Coupling for Metal latch		
					2QF = 1/4" Female Quick Coupling with Metal latch	2QF = 1/4" Female Quick Coupling with Metal latch		
					2QFP = 1/4" Female Quick Coupling with Plastic latch	2QFP = 1/4" Female Quick Coupling with Plastic latch		
					2QP = 1/4" Male Quick Coupling for Plastic latch	2QP = 1/4" Male Quick Coupling for Plastic latch		
					3H = 3/8" Hose Barb	3H = 3/8" Hose Barb		
					3HE = 3/8" Hose Barb Elbow	3HE = 3/8" Hose Barb Elbow		
					3NF = 3/8" FNPT	3NF = 3/8" FNPT		
					4H = 1/2" Hose Barb	4H = 1/2" Hose Barb		
					4N = 1/2" MNPT	4N = 1/2" MNPT		
					4QP = 1/2" Male Quick Coupling for Plastic latch	4QP = 1/2" Male Quick Coupling for Plastic latch		
					MT = 1/2" Tri clamps	MT = 1/2" Tri clamps		
					TC = 1-1/2" Tri clamp	TC = 1-1/2" Tri clamp		
<p><b>Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron PES Capsule, Pharma Grade, with 1.5" Tri-Clamp fittings would be SKLS020STCTC-PH</b></p> <p><small>Quick Couplings are molded. Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), Link Tech and others.</small></p>								



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