

## PureFlo® Biological Reduction Grade Capsules A High performance encapsulated PES membrane filter

The PureFlo® Biological Reduction Grade filter capsule in its all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. PureFlo® Biological grade capsules have been designed for bioreduction in pharmaceutical 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.



### 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

#### Autoclavable & Sanitizable

Capsules can be autoclaved up to six times at 126°C for 60 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90°C for a limited time (dependent on time and temperature).

#### Water Bubble Point Specification

0.1um : 23psi (IPA)  
0.2um : 47psi  
0.45um: 33psi

#### Bacterial Endotoxin

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

### **Applications**

Culture media	Fermentation Broths
Serums	SVP (Small volume parenterals)
Vaccines	Bio Reduction
Reagents & Buffers	Biologics
Antibiotics	Beverages
WFI-POU	Scale-up processes

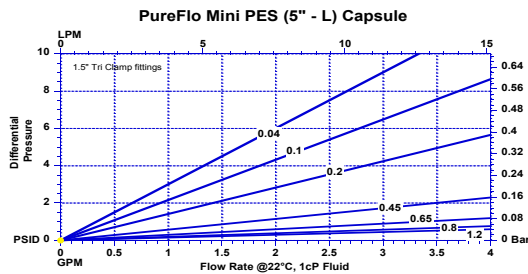
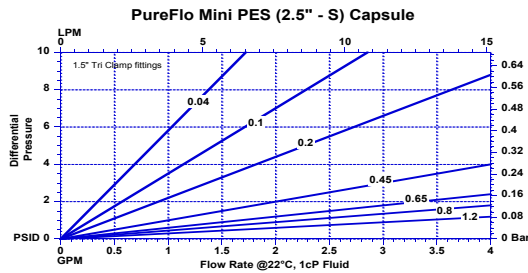
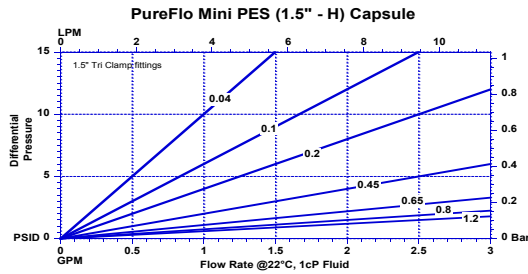
### **Features**

- Hydrophilic PES Membrane
- Small Compact Design
- Low Filter Extractables

### **Benefits**

- Inherently hydrophilic for cleaner filtrates
- High flow rate reduces processing time
- Low protein-binding membrane maximizing yields
- Biologically inert membrane
- Bacterial retentive to produce sterile solutions
- Simple, quick, and efficient filtration
- Low hold-up volume reduces product waste
- No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness
- All capsules are rinsed with pyrogen-free water

## PureFlo® Biological Reduction Grade Capsules



Note - Graphs based on Sanitary fittings.

### Materials of Construction

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

### Fitting Connections

NPT, Sanitary Flange, Hose Barb, Couplings  
 Vent/Drain - Luer Lock with Cap

### Dimensions (nominal)

Length: 1.5 in (100 mm)    Length: 2.5 in (125 mm)  
 Length: 5.0 in (220 mm)    Length: 7.5 in (270 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>)    7.5 in - 4.3 ft<sup>2</sup> (3980 cm<sup>2</sup>)  
 10 in - 5.6 ft<sup>2</sup> (5200 cm<sup>2</sup>)

### Operating Conditions

Maximum Operating Pressure:  
 Liquid: 5.5 bar (80psi) at 77°F/25°C  
 Gas: 4.1 bar (60psi) at 77°F/25°C  
 Minimum Burst Pressure:  
 8.3 bar (120psi) at 77°F/25°C  
 Maximum Forward Differential Pressure:  
 4.21 bar (60psi) at 68°F/20°C  
 Maximum Reverse Differential Pressure:  
 2.1 bar (30psi) at 68°F/20°C  
 Maximum Operating Temperature:  
 PP & Gamma PP: 176°F/80°C  
 HDPE: 140°F/60°C

## PureFlo PES Filter Capsule (Biological Grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SK  70mm Diameter Capsule	L = Female Luer Lock	S = PES	004 = 0.04um	H = 1.5"	1H = 1/8" Hose barb	1H = 1/8" Hose barb	-B = Biological Reduction Grade  -GP = Gamma stable polypropylene shell -NY = Nylon Construction -FB = Filling bell -FC = Filling bell with Cap -ETO = Ethylene oxide sterilization -NI = No vent or drain inlet fitting -NO = NO vent or drain Outlet fitting -E = Polyethylene shell and HDPE media support for gamma sterilization
	P = M8 Threaded Plug - Limited options		010 = 0.1um	S = 2.5"	1NF = 1/8" FNPT	1NF = 1/8" FNPT	
	N = No vent or drain fittings		020 = 0.2um	L = 5"	1Q = 1/8" Male Quick Coupling for Metal latch	1Q = 1/8" Male Quick Coupling for Metal latch	
			050 = 0.45um	E = 7.5"	1QF = 1/8" Female Quick Coupling w/ Metal latch	1QF = 1/8" Female Quick Coupling w/ Metal latch	
			065 = 0.65um	K = 10"	2H = 1/4" to 1/2" Hose barb	2H = 1/4" to 1/2" Hose barb	
			080 = 0.8um		2HS = 1/4" to 3/8" Hose barb	2HS = 1/4" to 3/8" Hose barb	
			120 = 1.2um		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 w/ Metal latch	2QF = 1/4" Female Quick Coupling w/ Metal latch	
					2QFP = 1/4" Female Quick Coupling w/ Plastic latch	2QFP = 1/4" Female Quick Coupling w/ 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	
Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron PES Capsule, Biological Reduction Grade, with 1.5" Tri-Clamp fittings would be SKLS020STCTC-B Quick Couplings are molded. Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.							

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