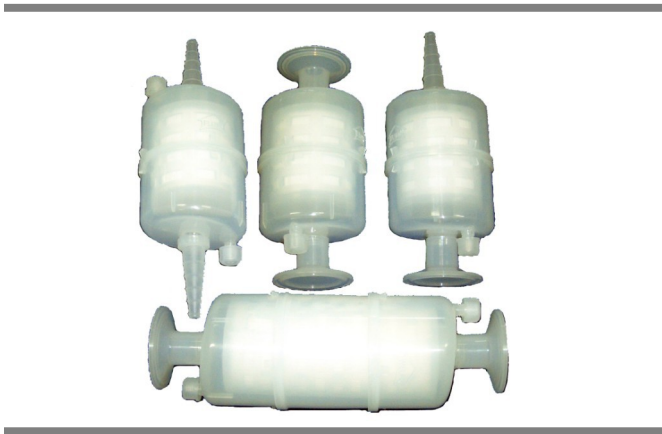


PureFlo® Biological Reduction Grade Capsules

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

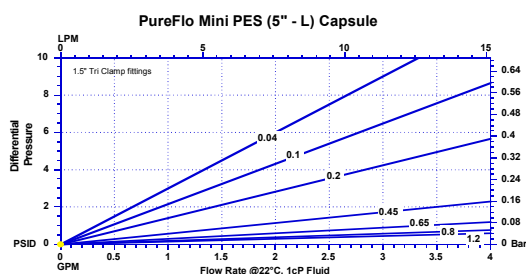
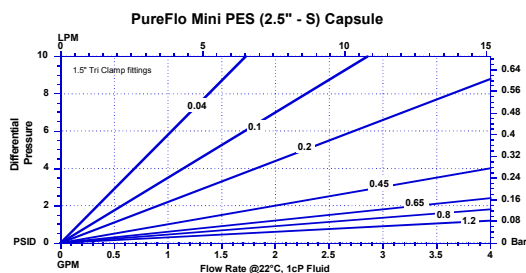
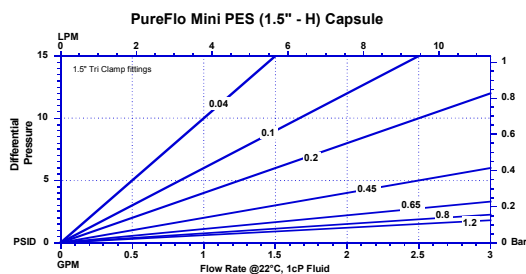
Bacterial Endotoxin

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	Benefits
<ul style="list-style-type: none"> ■ Hydrophilic PES Membrane 	<ul style="list-style-type: none"> ■ 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
<ul style="list-style-type: none"> ■ Small Compact Design 	<ul style="list-style-type: none"> ■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces product waste
<ul style="list-style-type: none"> ■ Low Filter Extractables 	<ul style="list-style-type: none"> ■ 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 ft² (720 cm²) 2.5 in - 1.48 ft² (1380 cm²)
 5.0 in - 2.8 ft² (2600 cm²) 7.5 in - 4.3 ft² (3980 cm²)
 10 in - 5.6 ft² (5200 cm²)

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 P = M8 Threaded Plug - Limited options N = No vent or drain fittings	S = PES010	004 = 0.04um	L = 1.5"	1H = 1/8" Hose barbs	1H = 1/8" Hose barbs	-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
			010 = 0.1um	L = 2.5"	1NF = 1/8" FNPT	1NF = 1/8" FNPT	
			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	L = 7.5"	1QF = 1/8" Female Quick Coupling w/ Metal latch	1QF = 1/8" Female Quick Coupling w/ Metal latch	
			065 = 0.65um	L = 10"	2H = 1/4" to 1/2" Hose barbs	2H = 1/4" to 1/2" Hose barbs	
			080 = 0.8um		2HS = 1/4" to 3/8" Hose barbs	2HS = 1/4" to 3/8" Hose barbs	
			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				
<p>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 SKLS0205TCTC-B</p> <p><small>Quick Couplings are molded. Female Quick Coupling with Plastic latch will be threaded on compatible with CPC (Colder), LinkTech and others.</small></p>							



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