

## SZL Series Nylon Capsules

### Pharmaceutical Grade

The PureFlo® SZL Series Nylon filter capsule is designed for improved wettability in processes which require critical integrity validation testing. The unit provides excellent compatibility and superior flow per unit area as compared to other membrane capsules. The PureFlo® Nylon filter capsules have been specially designed for sterilizing in biopharmaceutical applications where bacterial retention is required. The hydrophilic nylon membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The nylon membrane is a low protein-binding media to improve your process.

The capsules were specifically designed with an easy-to-wet-out structure of nylon membrane, polyester (PET) support and internal nylon end caps. The units have luer lock plugs for the vent & drain for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes of fluid for processing in production, 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 speed production. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.



### Applications

Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
BioBags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale-up Processing
Water	Serums

### Specifications

Materials of Construction:	Membrane: Nylon 6,6 Membrane Supports: PET (Polyester) Shell, Cage, Core: Polypropylene ; End Caps: Nylon Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5.0 in (127 mm), 7.5 in (191 mm), 10 in (254 mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in: 0.74 ft <sup>2</sup> (690 cm <sup>2</sup> ), 2.5 in: 1.4 ft <sup>2</sup> (1300 cm <sup>2</sup> ), 5.0 in: 2.6 ft <sup>2</sup> (2420 cm <sup>2</sup> ), 7.5 in: 4.0 ft <sup>2</sup> (3720 cm <sup>2</sup> ), 10 in: 5.3 ft <sup>2</sup> (4920 cm <sup>2</sup> )
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 25 °C Maximum Forward Differential Pressure: 5 bar (72.5 psi) at 22 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psi) at 22 °C Maximum Operating Temperature: PP & Gamma PP: 80 °C HDPE: 60 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

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### Specifications (cont.)

#### Bacterial Retention:

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

#### Autoclavable & Sanitizable:

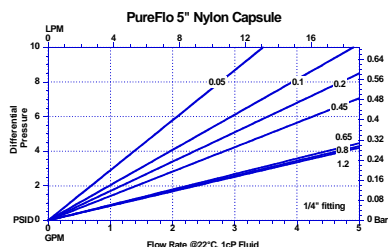
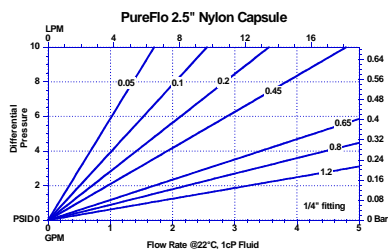
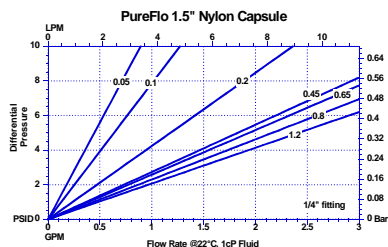
Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

#### Water Bubble Point Specification:

0.1 µm: 23 psi (0.16 MPa) in IPA  
0.2 µm: 50 psi (0.35 MPa)

#### Bacterial Endotoxin:

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



### PureFlo SZL Series Nylon Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options	
SZ	L = Female Luer Lock	N = Nylon	005 = 0.05	H = 1.5"	1C	1C = 1/8" Compression	Grade	O-Ring for Quick
	010 = 0.10		S = 2.5"	1H	1H = 1/8" Hose barbs	-PH = Pharma Grade	-OE = O-ring EPDM	
PP Shell & Nylon end-caps	P = M8 Threaded Plug <u>- Limited options</u>	020 = 0.20	L = 5"	1N	1N = 1/8" MNPT	Shell Material	-ON = O-ring Nitrile	
		045 = 0.45	E = 7.5"	1NF	1NF = 1/8" FNPT	Blank = Gamma stable polypropylene	-OV = O-ring Viton	
Polyester support		065 = 0.65	K = 10"	1Q	1Q = 1/8" Male Quick Coupling with Metal latch		Blank = O-ring Silicon (Standard)	
Polypropylene Cage & Core		080 = 0.80		1QF	1QF = 1/8" Female Quick Coupling with Metal latch			
		120 = 1.20		1QFV	1QFV = 1/8" Female Valved Quick Coupling with Metal latch	-NY = Nylon Construction	Prefilters	
Internal Silicone O-ring				1QV	1QV = 1/8" Male Valved Quick Coupling with Metal latch	-E = Polyethylene shell and HDPE media support for gamma sterilization	-G(pore Size) = Glass Fiber PreFilter	
				2H	2H = 1/4" to 1/2" Hose barbs		-P(pore Size) = PolyPro Media PreFilter	
70mm Diameter Capsule with Bleed Valve				2HS	2HS = 1/4" to 3/8" Hose barbs	Vent & Drain	-S(pore Size) = PES PreFilter	
				2LF	2LF = Large Female Luer Lock fitting	-NI = No vent or drain Inlet fitting		
				2N	2N = 1/4" MNPT	-NO = NO vent or drain Outlet fitting		
				2NF	2NF = 1/4" FNPT	-N = No vent or drain fittings		
				2P	2P = 1/4" Push to Connect	Sterilizaion		
				2PE	2PE = 1/4" Push to Connect Elbow	-ETO = Ethylene oxide sterilization		
				2Q	2Q = 1/4" Male Quick Coupling for Metal latch			
				2QF	2QF = 1/4" Female Quick Coupling with Metal latch			
				2QFP	2QFP = 1/4" Female Quick Coupling with Plastic latch			
				2QFV	2QFV = 1/4" Female Valved Quick Coupling with Metal latch			
				2QP	2QP = 1/4" Male Quick Coupling for Plastic latch			
				2QV	2QV = 1/4" Male Valved Quick Coupling with Metal latch			
				2V	2V = 1/4" Walther Quick Connect			
				3H	3H = 3/8" Hose Barb			
				3HE	3HE = 3/8" Hose Barb Elbow			
					3H-FB = 3/8" Hose Barb with filling bell or -FC with Cap			
				3NF	3NF = 3/8" FNPT			
				4H	4H = 1/2" Hose Barb			
				4N	4N = 1/2" MNPT			
				4Q	4Q = 1/2" Male Quick Coupling for Plastic latch			
				MT	MT = 1/2" Tri clamps			
				TC	TC = 1-1/2" Tri clamp			
					TS = Shower Head			
Example - 0.2um PES Pharma Grade, Luer Lock Vent/Drain, 1.5" internal filter, 1/4" MNPT I/O is SZLS020H2N2N-PH								
Quick Couplings are molded. Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), Link Tech and others.								

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Your Local Distributor:

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