

**mdi** syringe filter type SYPL have PES membrane filter in a poly-propylene housing. These syringe filters are used for filtration and sterilization of protein solutions, culture media and buffers. The low protein binding characteristics make these ideal for these applications, particularly where sample size is very small and recovery of protein of interest is sought.

**mdi** SYPL syringe filters provide absolute retention, very low hold up volumes and low protein binding while offering excellent throughputs. The filters are validated and assured for quality to ensure superior performance.

## Special Features

- Absolute retention efficiency
- 16 Channels for minimum back pressure
- Low protein binding
- Hydrophilic
- Validated for bacterial retention as per ASTM F838-05

## Applications

- Sterilization of high value additives such as hormones, vitamins and antibiotics
- Sterilization of protein solutions, culture media and buffers
- Sterilization of purified DNA



## Specifications

### Materials of Construction

<b>Housing</b>	Polypropylene
<b>Filter Media</b>	PES Membrane

### Pore Size

0.2 µm, 0.45 µm

### Bubble Point

0.2 µm	≥ 50 psi (≥ 3.52 Kg/cm <sup>2</sup> )
0.45 µm	≥ 30 psi (≥ 2.11 Kg/cm <sup>2</sup> )

### Inlet/Outlet Connections

Inlet: Female luer-lock  
Outlet: Male luer slip

### Typical Hold-up Volume(with air purge)

4mm	13mm	25mm
<5µl	<20µl	<50µl

### Sterilization Compatibility

EO Sterilizable	Yes
Gamma Sterilizable	Yes

**Burst Pressure (13mm/25mm)**  
>14kg/cm<sup>2</sup>

**Maximum Operating Temperature**  
55 °C

**Maximum Operating Pressure**  
75 psi @ 25° C

### Retention Efficiency

0.2 µm	LRV >10 <sup>7</sup> <i>B. Diminuta</i> (ATCC 19146) per cm <sup>2</sup> of filter area
0.45 µm	LRV >10 <sup>7</sup> <i>S. marcescens</i> (ATCC 14756) per cm <sup>2</sup> of filter area

### Recommended Sample Volume

4mm	13mm	25mm
< 1 ml	< 10 ml	< 100 ml

### Biosafety

Passes the Biological Reactivity Tests, *In Vivo* for Class VI plastics as described in USP <88>.

### Cytotoxicity

Passes the Biological Reactivity Tests, *In Vitro* for Cytotoxicity as described in USP <87>.

### Fiber Release

Complies with USFDA CFR Title 21, Part 210.3(b)(6) and do not requires any initial flushing

### Particle Release

The filtrate complies with USP <788> test for particulate matter in injections

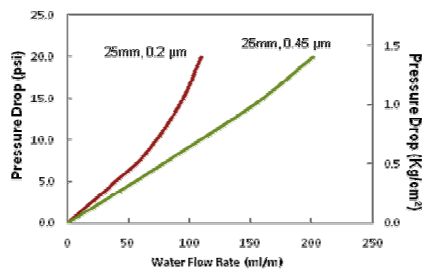
### Indirect Food Additives

The plastic housing material complies with the requirements of USFDA CFR Title 21 Part 177.1520

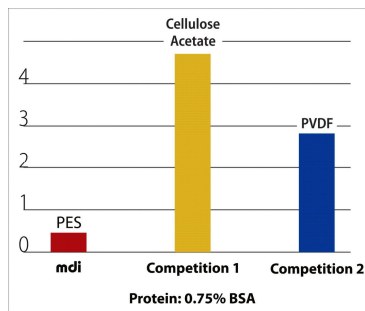
### Oxidizable Matter

Passes test as per USP <1231>

### Water Flow Rate



### Low Protein Binding (µg/cm<sup>2</sup>)



### Packaging

#### Standard Pack:

Pre-sterilized PES membrane syringe filters are individually packed in blister packs with peel off. The integrity of the package has been validated as per ASTM F 1929 – 98.

These individually packed filters are packed in boxes of 100 each specially designed for easy front access.



### Storage

It is recommended to keep the syringe filters:

- i. at clean and dry location
- ii. away from direct heat sources at temperature below 50°C

### Ordering Information

Type	Size		Pore Size		Inlet/Outlet		XX	Sterility		Pack Size	
	Code	Diameter	Code	Code	Code	Code		Code	Qty	Code	
Presterilized polyethersulfone membrane syringe filter	SYPL	4mm	01	0.2µm	01	Female Luer Lock	M	EO Sterile	2	100	04
		13mm	03	0.45µm	02	Male Luer Slip	N	Gamma Sterile	3		
		25mm	06								
<b>Example:</b>											
	SYPL	06		01		MN	XX	2			04