

UniPore™ Hydrophilic PES Filter

Application in liquid filtration for pharmaceutical processes

LePure UniPore™ filtration membranes, through the optimization of formulations and membrane manufacturing processes, significantly enhance the pollutant loading capacity while maintaining the performance advantages of traditional PES membranes. They demonstrate outstanding adaptability to high-viscosity and high-solid-content feed solutions, making them an optimal choice for biopharmaceutical enterprises to achieve efficient and safe production.

Product

- Highly asymmetric membrane structure enables high Flux
- Reliable bacterial retention capability
- 100% integrity testing (if applicable)
- 100% Pressure Hold Test*
- 100% pre-flushing
- Excellent chemical compatibility (pH 1-14)
- Outstanding performance with easily clogging liquids
- An excellent choice for reducing bioburden and removing particles
- Wide compatibility and easy scalability
- Exhibits low adsorption to proteins and active ingredients, facilitating easy filtration
- Various inlet and outlet combinations are available

*The 100% Pressure Hold Test is applicable only to Capsule filters.

Typical Application

The UniPore™ is the recommended choice for reducing biological load filtration. It not only performs sterilization filtration excellently but also has excellent dirt-holding performance. Applicable to applications as follows:

- Biopharma industry
- Blood products industry
- Chemical drugs
- Dairy industry
- Food and beverage industry



Technical Parameters of Cartridge Filter

Size	2.5"	5"	10"	20"	30"	40"
Filtration Area (m²)	0.17	0.33	0.66	1.32	1.98	2.64
Material Composition						
Filter Membrane	Hydrophilic Polyethersulfone (PES)					
Supports	Polypropylene (PP)					
Seal Ring	Silicone/FKM/EPDM/Nitrile butadiene (NBR)/Outer tetrafluoroethylene rubber					
Cap Type	Triangular Fin/Cylindrical Sharp Corner/Flatend cap/Two flat port					
Interface Type	222 Standard Type 226 Standard Type 222 Lined Steel Ring Type 226 Lined Steel Ring Type					
Pore Size and Pore Size Combinations(µm)	USSA-0.2					
	USDA-0.45/0.2					
	USDB-0.65/0.2					
	UMDA-0.2/0.1					
	UBSA-0.45					
	UPSA-0.65					
	UMDB-0.45/0.1					
Sterilization Method						
SIP	134°C Sterilization for 30 minutes, 30 cycles (Pressure differential ≤350 mbar)					
No Fiber Release	Complies with the 'No Fiber' release regulations in 21 CFR 210.3 (b) (6)					
Endotoxin	< 0.25 EU/mL					
Biocompatibility	Passed USP <87> and USP <88> Test					

Quality Specifications

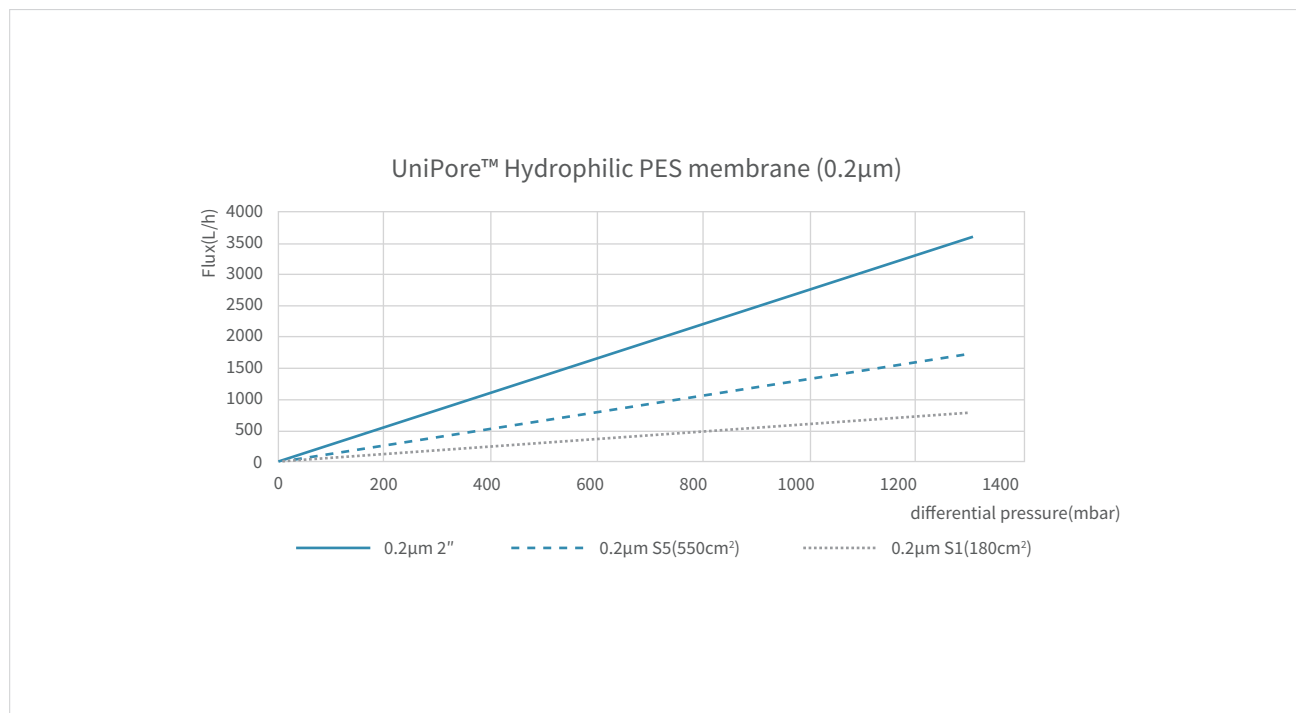
All components that come into contact with the sample liquid meet regulatory requirements

Endotoxin	< 2.15 EU/ unit
Biocompatibility	Compliant with USP <87> and USP <88> Class VI plastic biocompatibility requirements

Technical Parameters of Capsule Filter

Size	S1/S2	S3	S5	S6	2"	4"	5"	10"	20"
Filtration Area (m²)	0.018	0.030	0.055	0.030	0.13	0.23	0.33	0.66	1.32
Material Composition									
Filter Membran	Hydrophilic Polyethersulfone (PES)								
Support	Polypropylene (PP)								
Housing	Polypropylene (PP)								
Seal Ring	Silicone								
Filter Membrane Protection Layer	Polypropylene (PP)								
Pore Size and Pore Size Combinations(µm)	USSA-0.2								
	USDA-0.45/0.2								
	USDB-0.65/0.2								
	UMDA-0.2/0.1								
	UBSA-0.45								
	UPSA-0.65								
	UMDB-0.45/0.1								
Maximum Operating Pressure									
Forward Pressure (mbar) @ 25 °C	4000	4000	5000	4000	5000	5000	5000	5000	5000
Back Pressure (mbar) @ 25 °C	2000	2000	2500	2000	2500	2500	2500	2500	2500
Sterilization Method									
Gamma Sterilization	25-40 kGy								
Autoclaving	126 °C Sterilization, 60 minutes, 25 cycles								
No Fiber Release	Complies with the 'No Fiber' release regulations in 21 CFR 210.3 (b) (6)								
Endotoxin	< 0.25 EU/mL								
Biocompatibility	Passed USP <87> and USP <88> test								

UniPore™ Filter Flux Characteristics Chart (20°C)



Ordering Information*

UniPore™ Cartridge Filter

G10	USDA	7	S	1
Filter type	Pore Size (µm)	Connector Type	O-Ring	Packaging Information
G02 (0.17m ²)	USSA-0.2	3-226 ∞ Fin	S-Silicone Rubber	1
G05 (0.33m ²)	USDA-0.45/0.2	4-222 ∞ Fin	V-Fluorine	1
G10 (0.66m ²)	USDB-0.65/0.2	5-226 Flat	Y-EPDM	1
G20(1.32m ²)	UMDA-0.2/0.1	6-222 Flat	F-Nitrile butadiene rubber (NBR)	1
G30 (1.98m ²)	UBSA-0.45	7-226 Fin	WV-Outer tetrafluoroethylene rubber	1
G40(2.64m ²)	UPSA-0.65	8-222 Fin		1
	UMDB-0.45/0.1			1

* Except the Turkish market.

UniPore™ Capsule Filter

L05	USDA	S	TT	1
Filter type	Pore Size (μm)	SterilizationType	Connectors	Packaging
D6 (17.3cm ² disc)	USSA-0.2	S: Gamma sterilized	NN/FF	6
S1 (180cm ²)	USDA-0.45/0.2	A: Autoclavable, non sterilized	FF/FO/OO	6
S3 (300cm ²)	USDB-0.65/0.2	D:Gamma-irradiat able,non sterilized	FF/FO	4
S5 (550cm ²)	UMDA-0.2/0.1		FF/FO/OO/TT/TH/HH	4
S6 (300cm ²)	UBSA-0.45		OO	4
L02 (0.13m ²)	UPSA-0.65		FF/FO/OO/TT/TH/HH	4
L04 (0.23m ²)	UMDB-0.45/0.1		FF/FO/OO/TT/TH/HH	3
L05 (0.33m ²)			TT/TH/HH	1
L10(0.66m ²)			TT/TH/HH	1
L20(1.32m ²)			TT/TB/BB	1
L30(1.98m ²)			TT/TB/BB	1

N: 1/4-1/2" Multi-barb Inlet/Outlet

F: 3/4" Sanitary TC inlet/Outlet

O: 1/4 -1/2" Multi-barb Inlet/Outlet

H: 1/2" Barb Inlet/Outlet

T: 1.5" Sanitary Tc inlet/Outlet

B: 3/4" Barb Inlet/Outlet

UniPore™ Hydrophilic PES code number- Syringe filter

Filter type	Pore Size (μm)	Sterilization Type	Connectors	Packaging
D2 (2.8 cm ² Syringe Filter)	USSA-0.2	S: Pre-sterilized	LL	Y: 50 pieces/package
	USDA-0.45/0.2	D: Suitable for Irradiation Sterilization		
	USDB-0.65/0.2	A: Suitable for autoclave		
	UMDA-0.2/0.1			
	UMDB-0.45/0.1			
	UBSA-0.45			
	UBDA-0.65/0.45			
	UPSA-0.65			

L: Luer connector

