

PES PLEATED FILTER CARTRIDGES

ADG FILTER SCIENCE offers single and dual-layer Polyethersulfone (PES) cartridge filters engineered for demanding clarification and bioburden reduction applications. The inherently hydrophilic PES membrane provides high flow rates and exceptional throughput without the need for pre-wetting agents, ensuring clean and pure filtrates.

Constructed for performance, our filters feature low protein binding characteristics, making them ideal for filtering products with high protein concentrations, preservatives, and other valuable components. From laboratory-scale trials to full-scale production, our filters use identical materials to ensure consistent, scalable, and reliable results.

Feature	Benefit
100% Integrity Tested	Guarantees performance and reliability out of the box.
Adhesive-Free Construction	Manufactured without adhesives or resins to minimize contamination and extractables.
Low Protein Binding	Maximizes yield by preventing the loss of valuable proteins and active ingredients.
Broad Chemical & pH Compatibility	Offers robust performance across a wide range of process fluids and conditions.
High Flow Rates & Long Service Life	Boosts process efficiency, reduces downtime, and lowers operational costs.
Good Heat-Resistance	Suitable for hot water sanitization and repeated steam sterilization cycles.
Non-Fiber Releasing	Meets the criteria defined in 21 CFR 210.3(b)(6) for product purity.

APPLICATION:

- Small & Large Volume Parenterals (SVPs & LVPs)
- Vaccines & Biologicals
- Diagnostics & Reagents
- Buffers & Process Liquids
- Water for Injection (WFI) & Water Purification
- Ophthalmic Solutions



MATERIAL OF CONSTRUCTION

Media:	Asymmetric, Hydrophilic Polyethersulfone (PES)
Support Media:	Polypropylene / Polyester
Inner and Outer Core:	Polypropylene
End caps:	Polypropylene
Gaskets/O-Rings:	Silicone, Nitrile, Fluoroelastomer, FEP Encapsulated

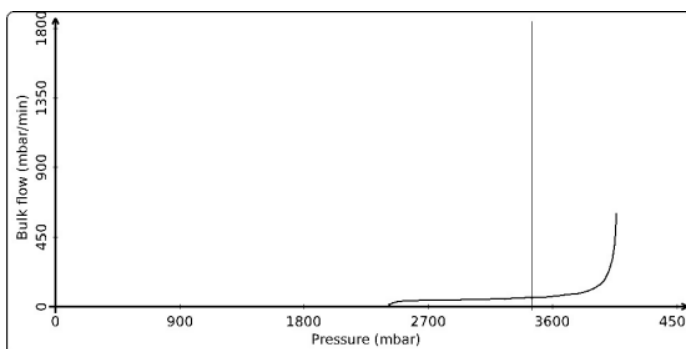
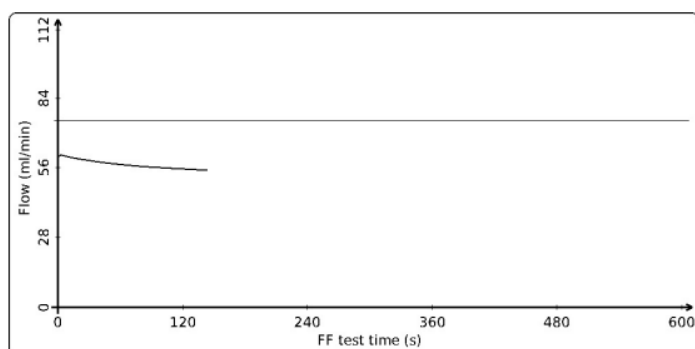
ADG/PFC/PES/Y5H21

Performance Specifications

Micron Rating	0.2, 0.45, 0.65, 0.8μ
Lengths:	10", 20", 30", 40"
Outside diameter:	Ø 70mm
Typical surface Area:	0.5 to 0.6 m ² per 10" filter
Recommended Change Out Pressure	35 psid (2.41 bard)
Maximum Differential Pressure:	80 psid (5.52 bard) at 20°C (68°F) 43.5 psid (3 bard) at 80°C (176°F)
Max Operating Temperature (water)	176°F at 30 psid (80 °C at 2.07 bard)

FUNCTIONAL SPECIFICATION:

Integrity test-water bubble point at 23°C(73.4°F)	0.22μm ≥ 3450mbar(50psi) 0.45μm ≥ 2450mbar(35 psi)
Forward Flow / Diffusion Value	≤ 30 mL/min at 35 psi per 10" for 0.2μ ≤ 62 mL/min at 25 psi per 10" for 0.45μ
Bacterial Retention	0.22μm ≥ 10 ⁷ CFU/cm ² <i>brevundimonas diminuta</i> (ATCC 19146) 0.45μm ≥ 10 ⁷ CFU/cm ² <i>serratia marcescens</i> (ATCC 14041)
Non-fiber Releasing	Meets the criteria for a "Non-fiber releasing" filter as defines in 21 CFR 210.3(b) (6)
Sanitation & Sterilization	1. Hot water sanitization - using purified water at 85°C 2.5 bard 2. Chemical Sanitization - Performed using industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals. 3. Inline Steam – 273 °F (134 °C), 20 min, 25 cycles 4. Autoclave* - 250 °F (121 °C), 30 min, 25 cycles
Bacterial Endotoxins	<0.25 EU/ml as determines by the LAL test.



Forward Flow + Bubble Point

PES ORDERING INFORMATION

ADG + MOC + GRADE + MICRON RATING + LENGTH + END CAPS + SEALS

ADG - 1+2+3+4+5+6

EXAMPLE - ADG-HPS-D-28-30-S7-S

TABLE 1- MOC

MATERIAL CODE

TABLE 2- GRADE

CONFIG. CODE

**TABLE 3-
MICRON**

μ CODE

TABLE 4 -LENGTH

LENGTH CODE

**TABLE 5 -
CONNECTIONS**

CAPS CODE

TABLE 6- SEALS

SEAL CODE

PES	HPS	DUAL LAYER	D	0.1	1	2.5"	02	226 + FLAT	S6	SILICONE	S
	BPS	SINGLE LAYER	S	0.2	2	5"	05	226 + FIN	S7	EPDM	E
				0.45	4	10"	10	222+FLAT	S3	FLUORO - ELASTOMERS	V
				0.65	6	20"	20	222+FIN	S8	NITRILE	B
				0.8	8	30"	30	INTERNAL O RING	SR	PTFE ENCAPSULATED	T
						40"	40				

END CAPS:



222+ FIN



222 + FLAT CAP



226 + FIN



226+FLAT



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