

ROTATING RIGHT

MAT SERIES PTFE MEMBRANE FILTER CARTRIDGES



MicroVantage™ MAT Series

*PTFE
Membrane Filter Elements*

Shelco's new MicroVantage™ pleated membrane cartridges are designed to meet the standards of a wide spectrum of industries. These cartridges are manufactured to the most stringent production standards making them the new benchmark of the industry. Manufactured in an ISO 9000 environment, each cartridge has its own lot code for traceability. Each operation including assembly, testing, cleaning, drying and packaging is done in an appropriately rated and certified clean room.

Features

- Each cartridge is individually tested for integrity and is absolute at the rated pore size
- Each cartridge is rinsed and flushed to remove any remaining manufacturing debris.
- All materials of construction meet requirements of the FDA Title 21 of The Code of Federal Regulations
- Cartridges are designed for maximum throughput and particle retention at the lowest pressure drop
- Final assemblies have been validated to pass USP class 6 Toxicology extractable tests, oxidizable substances for plastics, endotoxin level and other quality tests
- Manufactured with inherently hydrophobic PTFE membrane
- All beverage, electronic and pharmaceutical grades come with a certificate of quality assurance

Applications

Acids
Bases
Alcohols
Solvents
Esters
Ketones

Specialty Chemicals
Photoresists
Compressed Air
Process Gases
Tank Ventilation



Grade Definitions

- G Grade** Designed for general-purpose use at an effective cost. Each cartridge is rinsed with 60/40 IPA/DI water to remove potential extraneous manufacturing debris. Each cartridge module is individually tested for integrity then wrapped and individually boxed.
- B Grade** Designed for the food and beverage industry. Each cartridge is thoroughly rinsed with 60/40 IPA/DI water to remove potential extraneous manufacturing debris. This ensures that all extractables, which may effect performance are removed. Each cartridge module is individually tested for integrity then wrapped and individually boxed.
- E Grade** Designed to meet the special needs of the electronics and high purity chemical industries. Each cartridge module is pulse, power flushed until the rinse effluent reaches less than 3 ppb TOC. Each cartridge module is individually tested to ensure integrity.
- P Grade** Designed to be used in the pharmaceutical industry. Each cartridge is flushed and rinsed to ensure particle free filtrate. Each cartridge module is individually bubble point tested for integrity then wrapped and individually boxed. The rugged construction ensures repeatable steaming and testing.

Product Specifications

Pore Size Retention Ratings

0.1, 0.22, 0.45, 1.0 and 3.0 Microns

Pharmaceutical Grade available in 0.1 and 0.22 only

Materials of Construction

Filtration Media:	PTFE
Filtration Media Support:	Polypropylene
End Caps:	Polypropylene
Center Core:	Polypropylene
Outer Support Cage:	Polypropylene
Method of Construction:	Thermally Bonded
Gaskets and O-Rings	Buna, Viton, Silicone, EPR, Teflon Encapsulated Silicone or Viton

Sterilization

Autoclave:	127°C, 30 min, multiple cycles
In-Line Steam:	135°C, 30 min, multiple cycles

Maximum Differential Pressures

Forward:	50 psi (3.4 bar) at 20°C
Reverse:	40 psi (2.7 bar) at 20°C

Integrity Testing General, Beverage and Electronic Grades:

Pore Size	Bubble Point	Air Flow SCFM	Water Flow Rate
0.1 mm	21 PSI	26 SCFM/psid/10" Length	1.25 gpm/psid/10" length
0.22 mm	14 PSI	45 SCFM/psid/10" Length	2.8 gpm/psid/10" length
0.45 mm	8 PSI	>70 SCFM/psid/10" Length	5.7 gpm/psid/10" length
1.0 mm	6 PSI	>90 SCFM/psid/10" Length	9.0 gpm/psid/10" length
3.0 mm	3 PSI	>125 SCFM/psid/10" Length	11 gpm/psid/10" length

Integrity Testing Pharmaceutical Grade

Pore Size	Bubble Point	Air Flow SCFM	Water Flow Rate
0.1 mm	18 PSI	24 SCFM/psid/10" Length	1.20 gpm/psid/10" length
0.22 mm	14 PSI	42 SCFM/psid/10" Length	2.0 gpm/psid/10" length

Per 10" Length – (60/40, IPA / DI Water Wetted Membrane)

ORDERING GUIDE

MAT	0.2	- 10	S3	V	E	S
Product Code	Pore Size	Length	End Cap Configuration	Gasket/O-Ring	Grade	Insert
MAT = PTFE	0.1	5 = 4 7/8"	S1 = DOE w/ Flat Gaskets	B = Buna	Blank = General	Blank = None
	0.22	975 = 9 3/4"	S3 = 222 w/Fin End	E = EPR	B = Beverage	S = Stainless
	0.45	10 = 9 7/8"	S4 = 222 w/Flat End	S = Silicone	E = Electronic	Steel
	1.0	20 = 20"	S5 = 226 w/Fin End	V = Viton	P = Pharmaceutical	
	3.0	30 = 30"	S6 = 226 w/Flat End	T = Teflon		
		40 = 40"	S7 = Internal O-Ring w/Recessed Plug	Encapsulated		
			S9 = Internal O-Ring Both Ends	Viton		
			S10 = 222 w/Recessed Plug			
			S11 = SOE Flat w/Recessed Plug			
			S13 = 020 O-Ring			
			S20 = 223/Flat End			



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