CLARIFLOW®-E MINI-CAPSULES

Encapsulated PES membrane filters for microelectronics applications

Clariflow®-E mini-capsules filter high-quality water and solvents in semiconductor and microelectronics applications. The mirrored anisotropic polyethersulfone (PES) membrane provides superior fluid flow rates, extended on-stream life, and highly efficient removal of organic and inorganic particulates that can impact process quality.

Clariflow-E mini-capsules are available in a variety of sizes and endfitting combinations enabling users select the best configuration for their system requirements.

The encapsulated design maximizes efficiency by providing faster, easier change-out without laborious cleaning procedures. Eliminating the need to open reusable housings for cartridge replacement minimizes the chance of introducing contamination into the process, and promotes safety by reducing the risk of exposure to potentially hazardous fluids.

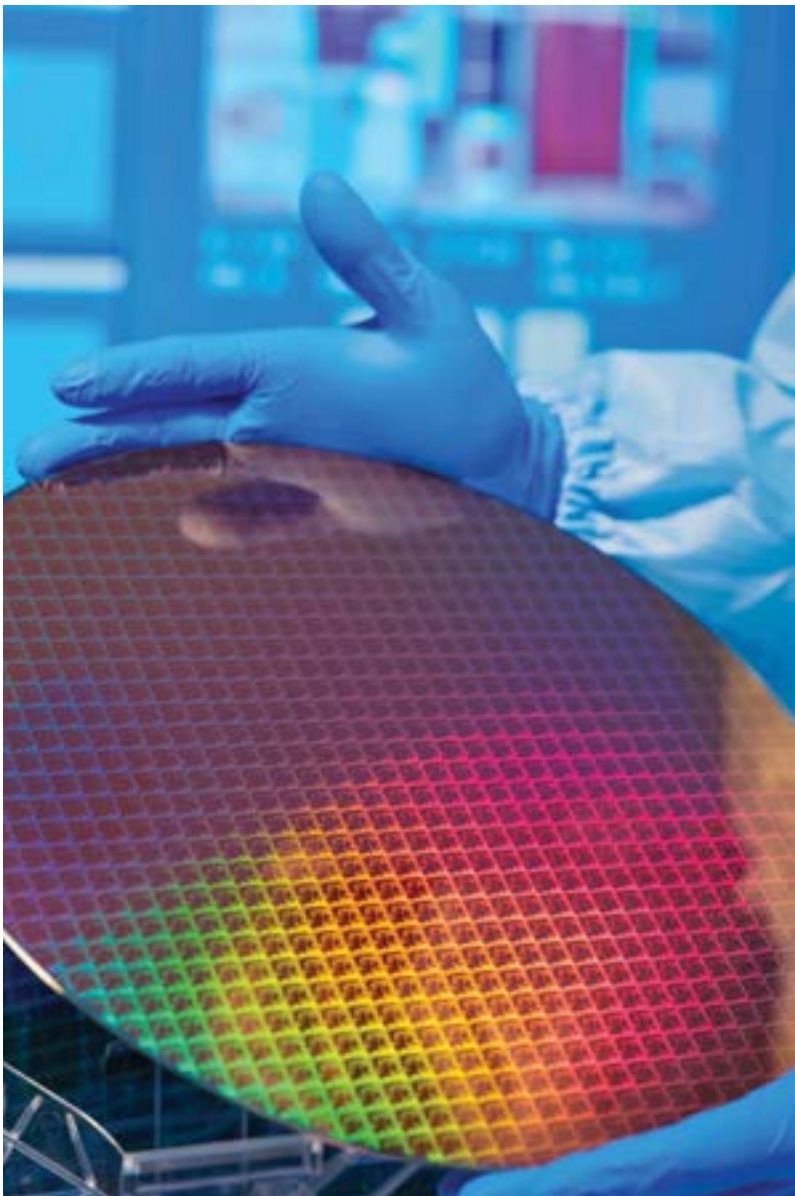


Benefits

- Reduce process down time, chance of contamination and risk of exposure to hazardous materials
- Low extractables shorten start-up time
- High flow rate reduces processing time
- Improved design prevents vent caps from disconnecting under pressure

Applications

- Deionized Water at Point-Of-Use
- Chemical Processing
- Solvent Filtration
- Etch Baths



Specifications

Materials of Construction
Membrane: Polyethersulfone
Support Layers: Polypropylene
Structure: Polypropylene
Housing: Polypropylene

All components are thermally bonded to ensure integrity and minimize extractables.

Effective Filtration Area
H = Half-size: 0.9ft² (0.08m²) per 4.82" (122mm) capsule
S = Standard-size: 1.8ft² (0.16m²) per 6.38″ (162mm) capsule
D = Double-size: 2.5ft² (0.23m²) per 7.92″ (201mm) capsule

Maximum Differential Pressure/Temperature
Forward: 70 psid (4.8 bar) @ 75°F (24°C)
35 psid (2.4 bar) @ 140°F (60°C)
20 psid (1.4 bar) @ 167°F (75°C)
Reverse: 30 psid (2.1 bar) @ 75°F (24°C)

Resistivity Rinse-up
The rinse-up volume required for double-size Clariflow®-E mini-capsules to reach 18megohm-cm resistivity is approximately 12gal (45.4 liters).

Performance Attributes

Water flow rates, Typical*			
Micron	Types	gpm/psid	lpm/100mbar
0.02	Half	0.06	0.3
	Standard	0.12	0.7
	Double	0.17	0.9
0.04	Half	0.13	0.7
	Standard	0.26	1.4
	Double	0.35	1.9
0.1	Half	0.19	1.0
	Standard	0.48	2.6
	Double	0.67	3.7
0.2	Half	0.45	2.5
	Standard	0.96	5.3
	Double	1.3	7.1
0.45	Half	0.65	3.6
	Standard	1.30	7.1
	Double	2.00	11.0
0.65	Half	1.3	7.1
	Standard	2.5	13.7
	Double	3.4	18.7
0.8	Half	1.5	8.2
	Standard	2.9	15.9
	Double	4.2	23.1

Integrity Test Values

Micron	Min. Bubble Point	
	PSIG	Bar
0.02	Consult Factory	
0.04	Consult Factory	
0.1	>70	4.5
0.2	>45	3.1
0.45	>30	2.1
0.65	>17	1.2
0.8	>15	1.0

Ordering Information

Each cartridge is identified with a product number, pore size and lot number for traceability.

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Size	
CODE	DESCRIPTION
H	Half Size
S	Standard Size
D	Double Size

Inlet/Outlet[1]	
CODE	CONNECTION
B	¼″ Hose Barb
H	½″ Hose Barb
S	1-½″ Sanitary Flange
D	Walther ⅜″ Male
P	¼″ NPT (Male)
J	½″ NPT (Male)
K	⅜″ NPT (Female)
G	½″ Swagelok®

[1]Select code for both Inlet and Outlet, if applicable.

Filter Rating	
CODE	MICRON
922	0.02
924	0.04
001	0.1
002	0.2
004	0.45
006	0.65
008	0.8

Vent O-Ring	
CODE	MATERIAL
0	Buna-N
1	EPDM
2	Silicone
4	Viton®
N	None
Z	No Vents

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WARNING: This product can expose you to chemicals including 1,3-Butadiene which are known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov