

Maximize Planarization Yield with Slurry-Mate Filter **Cartridges**

Parker's Fulflo® CMP Slurry-Mate[™] Filter Cartridges provide uniform slurry delivery while optimizing the chemical mechanical planarization of wafer interlayer dielectric (ILD) and tungsten and copper metal layers. A unique proprietary melt blown media provides a particle classification effect, which improves service life while maintaining optimum polishing characteristics of alumina and silica based slurries.

Several particle classification matrices are available to match the wide range of CMP oxide and metal polishing slurries in recirculation and distribution loops as well as point-of-use CMP tools.

Applications

Oxide Polishing Slurries: Metal Polishing Slurries:

Point of Use Point of Use Distribution Distribution

Recirculation Loop Recirculation Loop

Fulflo[®] Slurry-Mate[™] **Filter Cartridges**

■ Polypropylene

Pleated Series



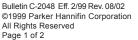
Features and Benefits

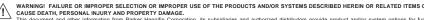
- Classification matrix extends slurry life and maintains consistent slurry delivery.
- All polypropylene contruction provides excellent compatibility for both acidic and basic slurries.
- Sieve-like filtration matrix provides sharp particle size cutoff to remove only agglomerated particles causing wafer surface damage.
- Heavy duty construction handles rigors of CMP process fluid conditions.
- Increase wafer yield by removing oversized, agglomerated or foreign particulate matter.

- Large Surface area provides high flux rate.
- All polymeric construction is totally incinerable.
- Thermal bonding eliminates particle bypass.
- Parker's TQM system assures consistent performance.
- Several classification matricies are available to accomodate wide range of polishing slurry formulations.
- Fits standard Fulflo and similar competitive filter vessels.

Process Filtration Division







Pleated Series

Specifications

Particle Classification Codes:

1 02, 04, 06, 08, 10, 12, 14, 16

Materials of Construction:

Filter Medium: Melt Blown PolypropyleneFilter Medium Support: Polypropylene

Structural Components: Natural polypropylene

O-Ring Material: EPDM, Viton, PFA/Viton

Gasket Material: Polyethylene FoamSealing Method: Thermal bonding

Dimensions:

Diameter: 2.5 in (64 mm)Lengths: 4-30 in (102-764 mm)

Maximum Recommended Operating Conditions:

Temperature:

200°F (93°C) @ 10 ΔP (0.7 bar)

■ Differential Pressure: 70 psi (4.8 bar) @ 77°F (25°C) 10 psi (0.7 bar) @ 200°F (93°C)

Flow Rate:

10 gpm (38 lpm) per 10 in cartridge

Changeout Net ∆P : 10 psi (0.7 bar)

■ Flow Factors (psid/gpm @ 1 cks per 10-inch cartridge)

Code	Flow Factors
02	1.00
04	0.75
06	0.50
08	0.13
10	0.03
12	0.02
14	0.01
16	0.01

+ P=Flow Rate X Viscosity (cks) X Flow Factor

■ Cartridge Selection Guide

Slurry Particle Size Range (micrometers)	Recommended Cartridge Code	Typical Application	
0.05 - 0.1	02		
0.10 - 0.2	04	Point of	
0.20 - 0.4	06	Use	
0.50 - 1.0	08		
1.00 - 2.0	10	Distribution	
2.00 - 4.0	12	Distribution	
4.00 - 8.0	14	Recirculation Loop	
7.00 - 14.0	16		

Note: Cartridge selection based on removing particles larger than the slurry particle size range specified.

Ordering Information

SMC	12	10	N	V	TC
Cartridge Code	Particle Classification Code	Nominal Length	Support Construction	 Seal Material	End Cap Configuration
SMC = Slurry-Mate Cartridge	02 04 06 08 10 12 14	Code (in) (mm) 04 4 102 10 9-13/16 249 20 19-15/16 506 30 30-1/16 764	N = Natural Polypropylene	A = Polyethylene Gasket (DO Only) E = EPDM O-ring T = PFA/Viton* O-ring V = Viton* O-ring	DO = Double Open End TC = 222 O-ring/Cap

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