

3M Separation and Purification Sciences Division Data Sheet

3M[™] Betapure[™] CMP Series Cartridges and Capsules

3M[™] Betapure[™] CMP series filter cartridges and capsules are high capacity depth filters optimized for oxide and metal slurries used in chemical mechanical planarization (CMP) applications. 3M Betapure CMP series filters are composed of all polypropylene components and feature a multi-zone "graded porosity" design for the optimum level of particle classification. This construction provides enhanced flow characteristics, including low pressure drop, to minimize shearing of the slurry while providing superior service life.

Features and Benefits

Graded Porosity

- · High contaminant holding capability
- Provides low pressure drop reducing the potential for fluid shear of the slurry

100% Polypropylene

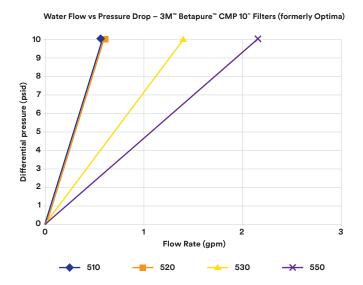
- Low cartridge extractables, free of adhesives, binders, and surfactants
- Excellent chemical compatibility with low and high pH slurries

Quality Manufacturing

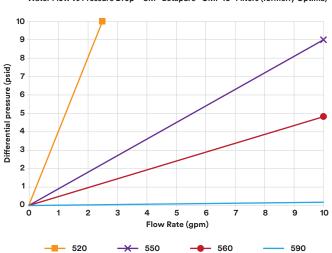
- ISO certified quality management system
- Manufactured and double-bagged in a clean environment

3M Betapure CMP series filter media was specifically engineered to provide low pressure drop and high retention via its graded porosity matrix. The media structure provides a sharp cut-off that will not alter the percent solids or desired target size particles thus preserving the polishing characteristics of the slurry.

Flow dP Graph for Filter Capsules



Flow dP Graph for Filter Cartridges



Water Flow vs Pressure Drop - 3M[™] Betapure[™] CMP 10" Filters (formerly Optima)



Technical Specifications – 3M[™] Betapure[™] CMP Filter Cartridge

Materials of Construction		
• Media, support layers, core and end caps	Polypropylene	
Operating Conditions		
Maximum Operating Pressure	60 psid @ 86°F (4.1 bar @ 40°C)	
Maximum Forward Differential Pressure	40 psid @ 140°F (2.0 bar @ 60°C)	
Maximum Operating Temperature	140°F (60°C)	

Part Numbering Guide

Technical Specifications – 3M[™] Betapure[™] CMP Filter Capsule

Materials of Construction			
 Media, support layers, core and end caps Capsule body, fittings 	Polypropylene		
Operating Conditions			
Maximum Operating Pressure	60 psid at 104°F (4.1 bar @ 40°C)		
Maximum Forward Differential Pressure	40 psid @ 104°F (2.7 bar @ 40°C)		
Maximum Operating Temperature	104°F (40°C)		

Model Number	3M ID Number	3M [™] Betapure [™] CMP Cartridge Description
CMP520P10UC	70020003227	3M Betapure CMP series filter cartridge, 0.5um, 10", 222/flat cap (code 0) EPR
CMP520P30CC	70020077767	3M Betapure CMP series filter cartridge, 0.5um, 30", 222/Spear, EPR
CMP520P30FC	70020159433	3M Betapure CMP series filter cartridge, 0.5um, 30", 222/flat cap, EPR
CMP550P10UC	70020123496	3M Betapure CMP series filter cartridge, 3um, 10", 222/flat cap (code 0) EPR
CMP550P20FC	70020077866	3M Betapure CMP series filter cartridge, 3um, 20", 222/flat cap, EPR
CMP560P20FC	70020077908	3M Betapure CMP series filter cartridge, 5um, 20", 222/flat cap, EPR
CMP590P20NG	70020333079	3M Betapure CMP series filter cartridge, 50um, 20", DOE, polyethylene foam gasket
Model Number	3M ID Number	3M [™] Betapure [™] CMP Capsule Description
CMP510C04KC06	70020259738	3M Betapure CMP series filter capsule, 0.3um, 4" long, 3/8" flaretek in/out no vent, no drain. EPR, 6 pack
CMP510C04LC06	70020267897	3M Betapure CMP series filter capsule, 0.3um, 4" long, 3/8" flaretek in/out, 1/4" flaretek vent/drain, EPR, 6 pack
CMP520C04KC01	70020077742	3M Betapure CMP series filter capsule, 0.5um, 4" long, 3/8" flaretek in/out no vent, no drain. EPR, 1 pack
CMP520C04KC06	70020157924	3M Betapure CMP series filter capsule, 0.5um, 4" long, 3/8" flaretek in/out no vent, no drain. EPR, 6 pack
CMP520C04KC06 CMP520C04LC01	70020157924 70020109859	3M Betapure CMP series filter capsule, 0.5um, 4" long, 3/8" flaretek in/out no vent, no drain. EPR, 6 pack 3M Betapure CMP series filter capsule, 0.5um, 4" long, 3/8" flaretek in/out, 1/4" flaretek vent/drain, EPR, 1 pack
CMP520C04LC01	70020109859	3M Betapure CMP series filter capsule, 0.5um, 4" long, 3/8" flaretek in/out, 1/4" flaretek vent/drain, EPR, 1 pack

Product Selection and Use

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