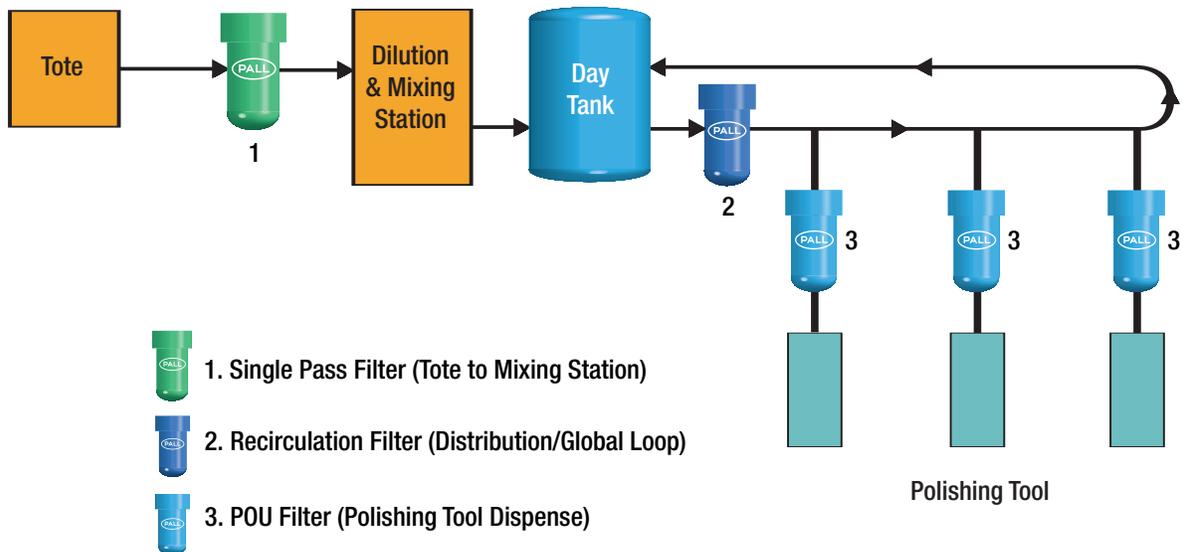


## CMP



Pall partners with suppliers and endusers to provide chemical mechanical polishing (CMP) filtration solutions. Pall is continually working to develop more efficient and economic products that address the wide variety of slurries and applications. Our product recommendations for each application are based upon Pall's experience with the various slurries used in the CMP processes noted below, as well as customer feedback and in-house testing.

### Recommended Filter Locations



### Filtration Solutions for ILD

ILD slurries are typically comprised of high solids (> 10%) fumed or colloidal silica. In addition, ceria abrasives at lower percent solids are being incorporated in some of today's more advanced dielectric applications.

Slurry Type	1. Tote to Day Tank	2. Global Loop	3. Point of Use (POU)
Fumed Silica	CMPure CMPD 1.5	CMPure CMPD 10	Starkleen™ A015 (capsule) CMPure CMPD 1.5 (cartridge)
Colloidal Silica	Profile® II Y005	CMPure CMPD 5	Starkleen Y005 (capsule) Profile II Y005 (cartridge)
Ceria	Profile Sirius Y002	Profile II Y030	Profile Sirius Y002 (capsule or cartridge)

## Filtration Solutions for Bulk Copper

First step (or bulk) copper slurries are typically comprised of low solids (< 5%) fumed alumina or colloidal silica. These slurries may contain proprietary chemistries that can influence filtration performance. The recommendations below are a general guideline. It is advised that you contact your Pall representative to obtain the most suitable filter recommendation for your specific slurry.

Slurry Type	1. Tote to Day Tank	2. Global Loop	3. Point of Use (POU)
Fumed Alumina	Profile® II Y005	CMPure CMPD 5	Starkleen™ Y003 (capsule) Profile II Y003 (cartridge)
Colloidal Silica	Profile II Y005	CMPure CMPD 5	Starkleen Y003 (capsule) Profile II Y003 (cartridge)

## Filtration Solutions for Barrier Copper

Barrier copper slurries are typically comprised of higher solids (usually 5% - 10%) fumed or colloidal silica. These slurries may contain proprietary chemistries that can influence filtration performance. The recommendations below are a general guideline. It is advised that you contact your Pall representative to obtain the most suitable filter recommendation for the specific slurry.

Slurry Type	1. Tote to Day Tank	2. Global Loop	3. Point of Use (POU)
Fumed Silica	CMPure CMPure 1.5	CMPure CMPD 10	Starkleen™ A010 (capsule) CMPure CMPD 1.5 (cartridge)
Colloidal Silica	Profile® II Y010	CMPure CMPD 5	Starkleen Y003 (capsule) Profile II Y003 (cartridge)

## Filtration Solutions for STI

STI slurries are typically comprised of ceria abrasives (5 % - 10%) solids. High solids (> 10%) fumed silica slurries have also been used for this application.

Slurry Type	1. Tote to Day Tank	2. Global Loop	3. Point of Use (POU)
Ceria	Profile® Sirius Y002	Profile II Y030	Profile Sirius Y002 (capsule or cartridge)
Fumed Silica	CMPure CMPD 1.5	CMPure CMPD 10	Starkleen™ A010 (capsule) CMPure CMPD 1.5 (cartridge)

## Filtration Solutions for Tungsten

Fumed and colloidal silica at low solids (< 5 %) are typically used for tungsten applications. Colloidal alumina is often the abrasive of choice on some mature applications.

Slurry Type	1. Tote to Day Tank	2. Global Loop	3. Point of Use (POU)
Colloidal Silica	Profile® II Y005	CMPure CMPD 5	Starkleen™ Y005 (capsule) Profile II Y005 (cartridge)
Fumed Silica	Profile II Y005	CMPure CMPD 5	Starkleen A010 (capsule) Profile II Y005 (cartridge)
Colloidal Alumina	Profile II Y050	CMPure CMPD 20	Starkleen A050 (capsule) Profile II Y050 (cartridge)



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