

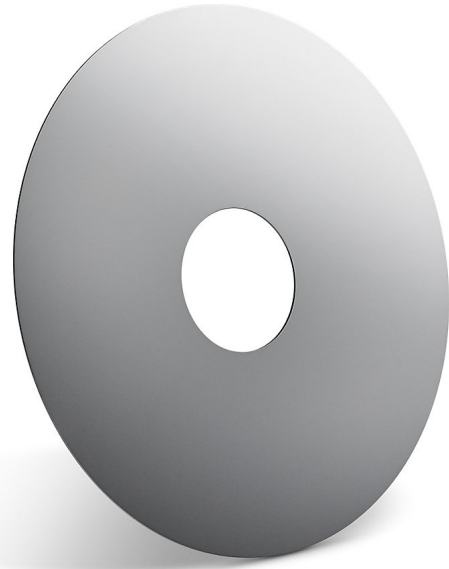
Nickel-Phosphorus Plated Substrate and Media Cleaning Solutions

Perform superior cleaning and protect nickel-phosphorus plated substrates from undesirable etch

Our hard disk drive (HDD) cleans are designed to be used after slurry polishing. They perform superior cleaning while protecting from undesirable etch. The formulation is designed to remove colloidal silica, nickel-phosphorus plated (Ni/P) swarf, slurry additives, suspension agents, and organic residues left or embedded on Ni/P disks during polishing. Our cleaning solutions reduce surface ion contamination and remove, suspend, and completely disperse contaminants. Cleaners are formulated to be used at ambient temperatures and are exceptionally free-rinsing.

APPLICATIONS

- Nickel-phosphorus plated aluminum
- Stainless steel, aluminum alloys, yellow metals, magnesium, ceramics, glass, various types of plastics
- Post colloidal silica or aluminum oxide slurry polishing
- Post-CMP clean lines (immersion, brush, spray, ultrasonic, megasonic)



FEATURES & BENEFITS

High performance surfactant technology	Allows high dispersion and free-rinsing
	Suspends and removes difficult-to-clean organic films, organic particulates, and inorganic particulates
	Reduces friction, allowing easy use in brush processes
Cleans effectively at ambient temperature	Minimizes dry-down residues
Corrosion inhibition package	Prevents corrosion and defectivity
	Extends equipment lifespan
	Designed for use with sensitive substrates
Well buffered cleaning solution	Has high impact at a variety of concentrations (generally 1-10%)

SPECIFICATIONS

Product	Key features
PCL 565	<ul style="list-style-type: none">Alkaline cleaner with high pH buffering stabilityHeavy duty surfactant used to clean alumina particlesCorrosion protectionPolymeric dispersantsChelants to prevent nickel ion redeposition
PCL 548	<ul style="list-style-type: none">Alkaline cleanerHighly rinsable surfactantCorrosion protectionLow foamChelants to prevent nickel ion redeposition
PCL 549-1	<ul style="list-style-type: none">Alkaline cleaner with minimal residual alkalinityHighly rinsable surfactantSurfactant package to remove organicsGood etch rateAdditives to prevent etched Ni from growing NiORinse aids to prevent staining
ACL 227-S2	<ul style="list-style-type: none">Neutral cleaner with buffer to hold pH stableAdditives to prevent aluminum etchAdditives to minimize passivation of aluminum layerSurfactants compatible with various PVA brush designs
ACL 227-2A	<ul style="list-style-type: none">Neutral cleanerDegreaser for aluminum and aluminum alloys
TCL 180	<ul style="list-style-type: none">Sulfuric-based acidic cleanerRemoves organic contaminationLow foaming surfactantSuitable for spray, ultrasonic, megasonic
TCL 185	<ul style="list-style-type: none">Citric-based acidic cleanerRemoves organic contaminationLow foaming surfactantSuitable for spray, ultrasonic, megasonic

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](https://www.entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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