Acculine Material Compatibility with Common Chemistries

This table is intended to help engineers specify which wet process tank and cleaning systems best fit their processes, chemistries, and applications. Please contact us for more information regarding material compatibility.

Process	Chemistry	Application	Process Tank
Si Iso Etch	HNO3 + H2O + NH4F	Etch Silicon	PFA Tank (near ambient)
Oxide Etch	10:1 HF (H2O + 49% HF)	Etch Silicon Dioxide	PFA Tank with heat exchange coils
Buffered Oxide Etch	5:1 (40% NH4F + 49% HF)	Silicon Dioxide	PFA Tank with heat exchange coils
Quickdump Rinse	H2O	Chemical removal	PVDF Quickdump
Post Hot Phos Rinse	H2O	Acid Rinse	PVDF Quickdump Megasonic
Post Piranha Rinse	H2O	Acid rinse, Sulfate removal	PVDF Quickdump Megasonic
SC-2, HPM, RCA2, Huang B	HCL + H2O2 + H2O	Metals removal, alkalis and metal hydroxide removal	Quartz recirculated Megasonic
SC-1, APM,RCA1, Huang A	NH4OH + H202 + H2O	Particle removal, light organics removal, protective oxide regrowth	Quartz recirculated Megasonic
EDP	NH2(CH2)2NH2 + C6H4(OH) + H20	Anisotropic Silicon Etch	Quartz static or recirculated
TMAH	TMAH	Anisotropic Silicon Etch	Quartz static or recirculated
Cu FeCl3 200	Copper etchant type CE-200 from Transene (30% FeCl3 + 3-4% HCl + H2O)	Etch Copper	Quartz static or recirculated
Cu APS 100	Copper etchant APS 100 from Transene (15-20% (NH4)2S2O8 + H2O)	Etch Copper	Quartz static or recirculated
NiCr TFN	Nichrome etchant TFN from Transene (10-20% (NH4)2Ce(NO3)6) + 5-6% HNO3 + H2O)	Etch NiCr	Quartz static or recirculated
Al Etch A	Al Etchant Type A from Transene (80% H3PO4 + 5% HNO3 + 5% HAc + 10%H2O)	Etch Aluminum	Quartz static or recirculated
CR-14	Chromium etchant CR-14 from Cyantek (22% (NH4) 2Ce(NO3)6) + 8% HAc + H2O)	Etch Chromium	Quartz static or recirculated
CR-7	Chromium etchant CR-7 from Cyantek (9% (NH 4)2Ce(NO3)6) + 6% HClO4 + H2O)	Etch Chromium	Quartz static or recirculated
Aqua regia	HCl + HNO3	Etch Gold	Quartz static or recirculated
AU-5	Gold etchant AU-5 from Cyantek (5% I2 + 10% KI + 85% H2O)	Etch Gold	Quartz static or recirculated
Moly Etch	Molybdenum etchant (180 H3PO4 : 11 HAc : 11 HNO3 : 150 H2O)	Etch Molybdenum	Quartz static or recirculated
Aqua regia, Dilute	Dilute aqua regia (3 HCl : 1 HNO3 : 2 H2O), ~30°C	Etch Noble metals	Quartz static or recirculated
Phos + Sulf	1 H2SO4 : 1 H3PO4	Etch Sapphire	Quartz static or recirculated
Pad Etch 4	Pad Etch 4 from Ashland (13% NH 4F + 32% HAc + 49% H2O + 6% propylene glycol + surfactant)	Etch SiO2, not Al	Quartz static or recirculated
Ti Etch	Titanium wet etchant (20 H2O : 1 H2O2 : 1 HF)	Etch Titanium	Quartz static or recirculated
H2O2 50°C	Hydrogen peroxide (30wt% H2O2, 70wt% H2O)	Etch Tungsten	Quartz static or recirculated
SA-80	(NH4)SO4 + H2SO4	Organics removal	Quartz static or recirculated
SOM, Sulfuric/Ozone mix	H2SO4 + O3	Organics removal	Quartz static or recirculated
DIO3, Ozinated water	DIH2O + O3	Organics removal, protective SiO2 regrowth	Quartz static or recirculated
Microstrip	Microstrip 2001 photoresist stripper, 85°C	Photoresist Strip	Quartz static or recirculated
Piranha, SPM	Piranha (~50 H2SO4 : 1 H2O2)	Resist strip, Post-ash residue removal, organic removal	Quartz static or recirculated
Phosphoric	Phosphoric Acid (85% by weight)	Etch Silicon nitride	Quartz static or recirculated Dedicated Nitride Etch System
Proprietary Solvent Resist Strippers	Various Solvents	Remove Photoresist	Quartz static or recirculated Stainless Steel (static or recirculated)
IPA	Isopropanol	Cleaning	Stainless Steel static or recirculated
Methanol	Methanol	Cleaning	Stainless Steel static or recirculated
Acetone	Acetone	Photoresist Strip	Stainless Steel static or recirculated
Anisotropic Etch	KOH (30% by weight)	Anisotropic Silicon Etch	PFA Tank with In-Line Heater

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