

Etchant	Material Etch Rate A/min		Al / 2% Si	Tungsten	Ti	Ti/W	Tantalum	Chrome	Molybdenum	Nickel	Platinum	Copper	Gold	
	Poly Si undoped	Dry ox												
Concentrated HF (49%) Room Temp	~	>10000		42 <50	>10000	~								
10:1 HF Room Temp		0	230	2500	0	11000 <70	<10	<10	<10	<10	<10	<10	<10	
25:1 HF Room Temp		0	95 >100		0 ~	~								
5:1 BHF Room Temp		2	1000	1400 <20	>10000	~	100 <10		0 <0.3	<1.1		0 <5	0	
Phosphoric Acid (85%) 160C	~		0.8	9800 ~	~	~	~		100 ~	~	~	~	~	
Silicon Etchant (126 HNO3 : 60 H2O : 5 NH4F) Room Temp		1000 >100		4000	130	3000 ~		5.8	8.8	11000	21	0	37	49
KOH (1:2 Water by weight) 80C	>10000	~	>10000		0 ~	~	<10		4.2	0	0	0	0	0
Aluminum Etchant Type A (16 H3PO4 : 1 HNO3 : 1 HAc : 2 H2O) 50C	<9		0	6600 ~		0 ~	~	~	0 ~		29 ~	>2900	~	~
Titanium Etchant (20 H2O : 1 H2O2 : 1 HF) Room Temp	~	>100	>100		0	8800 ~	~		0 ~	~	~	~	~	
H2O2(30%) Room Temp		0	0 <20		190	0	60							
Piranha (50 H2SO4 : 1 H2O2) 120C		0	0	1800 ~		2400 ~	<10	>16		18	380 <3		88	0
Acetone Room Temp		0	0	0 ~		0 ~		0	0	0	0	0	0	0
CF4+CHF3+He (90:30:120 sccm) 450W 2.8T		2100 >100	~	>100	>100	>100								
CF4+CHF3+He (90:30:120 sccm) 850W 2.8T		1700 >100	~	>100	>100	>100								
SF6+He (13:21 sccm) 10W 250mT		670	350 ~	>100	>100	>100								
CF4+CHF3+He (10:5:10 sccm) 200W 250mT	>100		710 ~	>100	>100	>100								
SF6+He (175:50 sccm) 150W 375mT		7000 >100	~	>100	>100	>100								
SF6+He (175:50 sccm) 250W 375mT		9200 >100	~	>100	>100	>100								
SF6 (25 sccm) 125W 200mT		2800 >100	~	>100	>100	>100								
CF4+CHF3+He (45:15:60 sccm) 100W 300mT		360 >100	~	>100	>100	>100								
Cl2+He (180:400 sccm) 275W 425mT		32000 ~	>100	>100	~	~								
HB+Cl2 (70:70 sccm) 200W 300mT		460 ~	>100	>100	~	~								
Cl2+BCl3+CHCl3+N2 (30:50:20:50 sccm) 250W 150mT	>100		670	6000 >100	~	~								
SF6 (80 sccm) 200W 150mT		5400 >100	~		2800 >100	>100								
O2 (51 sccm) 50W 300mT		0	0	0	0	0 ~								
O2 (51 sccm) 400W 300mT		0	0	0	0	0 ~	<10	~	<10	<10	<10	<10	<10	
Vapor HF		0 >100	Rough		0 Rough	~	~	<10	~	<10	<10	<10	<10	
XeF2 2.6T		1800 ~		0	800	290 ~	>100	<10	>100	~	~	~	~	