

Chemical Name	Common Name	Type	Authorized Equipment	Special Considerations
A-174 Silane	Parylene Curing Agent	Adhesion Agent	Parylene Coater	
Acetic Acid	Acetic Acid	Acid	-	PPE Required
Acetone	Acetone	Solvent	-	Degrades nitrile gloves
Acrylic sheet	Acrylic	Substrate	EBE	
Alumel	Alumel	Deposition Source	EBE	
Aluminum	Al	Deposition Source	EBE, DC Sputter	
Aluminum / Silicon / Copper	AL / Si / Cu	Deposition Source	Clustex	
Aluminum / Copper	Al / Cu	Deposition Source	Clustex	
Aluminum Etchant	Aluminum Etchant	Etchant	Light PPE	
Aluminum Nitride	Aluminum Nitride	Deposition Source	RF Sputter	
Aluminum Oxide	Aluminum Oxide, Al2O3	Deposition Source	EBE, RF Sputter	
Ammonium Hydroxide	NH4OH	Cleaning agent	Fume hoods	
AR 600-546	AR 600-547	EBL Developer	-	
AR 600-71	AR 600-72	EBL Stripper	-	
AR-P 6200.09	EBL Resist	EBL Resist	-	
AZ P4629 Photoresist	AZ P4629 Photoresist	Resist	-	
AZ 300 MIF	AZ 300 MIF	Developer	-	
AZ 400T Stripper	400T	Stripper	-	
AZ 400K Developer	AZ 400K Developer	Developer	-	
AZ 5214 EIR	AZ 5214 EIR	Developer	-	
AZ 726 MIF	AZ 726 MIF	Developer	-	
AZ nLOF 2020 Photoresist	AZ nLOF	Negative resist	Laurell, Bidtec spinners	
AZ P4620 Photoresist	AZ P4620	Resist	Laurell, Bidtec spinners	
AZ Developer 1:1	AZ Developer 1:2	Developer	-	
AZ 10XT 520CP photoresist	AZ 10XT resust	Resist	Laurell, Bidtec spinners	
Barium Fluoride	BaF2	Deposition Source	EBE, RF sputter	
Barium Strontium Titanate	BST	Deposition Source	RF Sputter	
Buffered Oxide Etch 7:1 Mixture	BOE	Acid	Web bench	PPE Required
C Thinner	C Thinner	Solvent	-	PPE Required
Cerium Oxide	CeO2	Depost	EBE	
Chlorobenzene	Chlorobenzene	Solvent	Only as a solvent in resist materials	
Chloroform	Chloroform	Solvent	Laurell spinner	
Chromel	Chromel	Deposition Source	EBE	
Chromium	Cr, Chrome	Deposition Source	EBE, DC Sputter	
Chromium Etchant	Chromium Etchant	Etchant	-	PPE Required
Chromium Oxide	Cr2O3	Deposition Source	Clustex	
CNT (1-2%) in PVDF composite substrate		Substrate	DC Sputter	
Cobalt	Co	Deposition Source	DC Sputter	
Copper	Cu	Deposition Source	EBE, DC Sputter	
Copper Etchant	Copper Etchant	Etchant	-	PPE Required
Copper Hydroxide	Cu(OH)2	Powder	MTI Annealing	
Copper Oxide	Cu2O	Deposition Source	Clustex	
Cyclopentanone 99%		Chemical		PPE
DisChem DisCharge H2O	DisCharge H2O	Coating Agent	Spin coaters	Careful disposal
DPX-C	Parylene Dimer	Coating Agent	Parylene Coater	
EBR 10A	EBR 10A	PR removal agent	Wet bench	
EBR PG	EBR PG	PR removal agent		
Erbium	Er	Deposition Source	EBE, DC Sputter	
Ethyl Lactate		Non-toxic chemicals		
Ferritin		Coating on SiO2/Si wafers	EBE	
Fomblin oil 45	Fomblin	Oil for vacuum pumps	Vacuum pumps	
Gallium Nitride	GaN	Deposition Source	EBE, RF Sputter	
Germanium	Ge	Deposition Source	EBE, RF Sputter	
Glycerol	Glycerol	Alcohol	Web bench	
Gold	Ag	Deposition Source	EBE	
Gold Etchant	Gold Etchant	Etchant	-	PPE Required
Graphite	C, Carbon	Substrate	PECVD, RIE	
Hafnium Oxide	HfO2	Deposition Source	Clustex, RF sputter	
Hafnium Nitride	HfN	Deposition Source	Clustex	
Hexamethyldisilazane	HMDS	Resist adhesion promoter	Mask aligners	
Hexane	Hexane	Solvent	Web bench	
Hydrochloric Acid	HCl	Acid	-	PPE Required
Hydrofluoric Acid 49%	HF	Acid	-	PPE Required
Hydrogen Peroxide 30%	Peroxide	Peroxide	-	
Indium	In	Deposition Source	EBE	
Indium Antimonide	InSb	Deposition Source	RF Sputter	
Indium Oxide / Tin Oxide	IO / TO	Deposition Source	Clustex	
Indium Tin Oxide	ITO	Deposition Source	RF Sputter	
Iron	Fe	Deposition Source	EBE, DC Sputter	
IP-Visio Photoresist		Nanoscribe resin	Nanoscribe	
IP-Q Photoresist		Nanoscribe resin	Nanoscribe	
IP-Dip Photoresist		Nanoscribe resin	Nanoscribe	
IP-L Photoresist		Nanoscribe resin	Nanoscribe	
IP-S Photoresist		Nanoscribe resin	Nanoscribe	
Iron(III) Oxide Etchant	Iron(III) Oxide Etchant	Etchant	-	
Isopropyl Alcohol	IPA	Solvent	-	
JRD1	JRD1	Coating agent	Spin coaters	
Lanthanum fluoride	LaF2	Deposition Source	EBE	
Lithium Aluminum Germanium Phosphate	LAPG	Deposition Source	RF Sputter	
Lithium Niobate	LiNbO3	Substrate	EBE, DC Sputter	
Lithium Tantalum Oxide	LiTaO3	Deposition Source	RF Sputter	
LOR 10A	LOR	Photoresist	Spin coaters	
LOR 30B	LOR	Photoresist	Spin coaters	
LOR 3A	LOR	Photoresist	Spin coaters	
LOR A1	LOR	Photoresist	Spin coaters	
Machinable Glass Ceramic	MACOR, Ceramic	Substrate	EBE, DC Sputter, RF Sputter	
Magnesium	Mg	Deposition Source	EBE	
Magnesium Fluoride	MgF2	Deposition Source	EBE	
Ma-N 2410		Photoresist	EVG610, MA6, MLA150	
MCC Primer	MCC	adhesion promoter	Spin coaters	

Methanol	Methanol	Solvent	-	
MF CD-26		Developer	Fume hoods	
1-Methyl-2-Pyrrolidinone		Solvent		
MIBK:IPA 1:3	EBL Developer	Developer	-	
Microposit MF-319	Microposit MF-320	Developer	-	
MMA(8.5) MAA EL9		Electron resist	spin coaters	
Molybdenum	Mo	Deposition Source	EBE, DC Sputter, Clustex	
Molybdenum Trioxide	MoO3	Deposition Source	RF Sputter, Clustex	
NanoStrip		Alternative to piranha solution	Wet bench	PPE Required
Nickel Etchant	Nickel Etchant, Ferric Chloride	Etchant	-	PPE Required
Nickel Oxide	NiO	Deposition Source	Clustex	
Niobium	Nb	Deposition Source	DC Sputter	
Niobium Nitride	NbN	Deposition Source	RF Sputter, Clustex	
Niobium Oxide	NbO	Deposition Source	Clustex	
Nitric Acid	Nitric Acid	Acid	-	PPE Required
Novac 7100		Solvent		
NR7		Negative resist	spin coaters	
NR 9 -1000PY		Negative resist	spin coaters	
NR9-1500PY		Negative resist	spin coaters	
NR9-3000PY		Negative resist	spin coaters	
NR9-6000PY		Negative resist	spin coaters	
NR26-12000P		Negative resist	spin coaters	
NR78-3000P		Negative resist	spin coaters	
NCM, Carbon Black, and PVDF film	NCM is composed of metal oxides; PVDF is an ethene, 1,1-difluoro-, homopolymer	Film on Al foil (not powders)	4-pt probe	
P(VDF-TrFE-CTFE), BaTiO3/PVDF composite (BaTiO3 20%wt), and BaTiO3/P(VDF-TrFE-CTFE) composite (BaTiO3 20%wt) substrates		Substrates	DC Sputter	
Omnicoat	Omnicoater	Adhesion promoter/releases for SU8	Wet bench	PPE Required
Palladium	Pd	Deposition Source	DC Sputter	
PermiNex 2015	PermiNex 2015	Negative resist	EVG610, MA6, MLA150	
Phosphoric Acid	Phosphoric Acid	Acid	-	PPE Required
Poly(acrylic acid)	PAA	Acidic cleaning agent		
Platinum	Pt	Deposition Source	EBE, DC Sputter	
Polydimethylsiloxane	PDMS	Solvent	-	
Polyether ether ketone	PEEK	Shadow mask	EBE	
Poly (methyl methacrylate)	PMMA	EBL Resist, substrate	EBL, Leskers	Depositions must be unheated
Polyethylene Terephthalate	PET	Substrate	RF Sputter	
Polystyrene	PS	Substrate	RF Sputter	
Polystyrene microspheres		Substrate, Deposition Source	Tegal asher	Greater than or equal to 1 micron in size
Potassium Hydroxide	KOH	Etchant	-	
Propylene Glycol Methyl Ether Acetate	PGMEA, NanoScribe Developer	Developer	-	
Polyvinylidene Difluoride	PVDF	Substrate	EBE, DC Sputter, RF Sputter	No substrate heating
RD6	RD6	Resist developer	Web bench	
Rhodium	Rh	Deposition Source	DC Sputter	
Ruthenium	Ru	Deposition Source	DC Sputter	
Ruthenium Oxide	RuO2	Deposition Source	Clustex	
S1818	S1819	Photoresist	-	
Sapphire enclosed Csl crystals			Spin coaters, Heidelberg	
Scandium	Sc	Deposition Source	EBE2 only	
Silicon	Si	Substrate, Deposition Source	EBE, DC Sputter, RF Sputter, Clustex	
Silicon Nitride	SiNx	Deposition Source	Clustex	
Silicon Dioxide	SiO2	Deposition Source	EBE, RF Sputter	
Silicon Monoxide	SiO	Deposition Source	EBE	
Silver	Ag	Deposition Source	Clustex, EBE, DC Sputter	
Silver Paste	Silver Paste	Thermally Conductive Sealant	DC Sputter, RF Sputter	
Spin-On Glass NDG-800	SOG	Spin-on Material	Laurell PHOTO Spin Coater	
SU-8	SU-8	Photoresist	-	
SU-8 developer	SU-8 Developer	Developer	Fume hoods	
Sulfuric Acid	Sulfuric Acid	Acid	-	PPE Required
Sylgard 184 Silicone Elastomer	Sylgard 184 Silicone Elastomer	Transparent Encapsulant	-	
Sylgard Curing Agent	Sylgard Curing Agent	Transparent Encapsulant	-	
Tantalum	Ta	Deposition Source	EBE, DC Sputter	
Tantalum / Aluminum	Ta / Al	Deposition Source	Clustex	
Tantalum Carbide	TaC	Deposition Source	Clustex	
Tantalum Nitride	TaN	Deposition Source	RF Sputter	
Tantalum Oxide (Ta2O5)	TaO5	Deposition Source	Clustex, RF sputter, EBE	
Tantalum Oxide (TaO1.8)	Ta1.8	Deposition Source	Clustex	
Tantalum Oxide (TaO2)	TaO2	Deposition Source	Clustex	
Tantalum Oxide (TaO2.2)	TaO2.2	Deposition Source	Clustex	
Tantalum Silicide	TiSi2	Deposition Source	Clustex	
Tetramethylammonium Hydroxide	TMAH, TMAOH	Developer	-	PPE Required
Titanium	Ti	Deposition Source	EBE, DC Sputter	
Titanium Carbide	TiC	Deposition Source	Clustex	
Titanium Etchant	Ti Etch	Etchant	-	PPE Required
Titanium Nitride	TiN, Ti-Nitride	Deposition Source	RF Sputter	
Titanium Oxide	TiO, Ti-Oxide	Deposition Source	EBE, Clustex	
Titanium Dioxide	TiO2	Deposition Source	EBE, Clustex, Lesker RF	
Trichloroethylene	TCE	Solvent	-	
(TRIDECAFLUORO-1,1,2,2TETRAHYDROOCTYL)TRICHLOROSILANE	Trichlor	Solvent	Fume hoods	
Toluene	Toluene	Solvent	Bidtec, fume hoods	Ventilation Required
Tungsten	W	Deposition Source	DC Sputter	
Tungsten Oxide	W2O5	Deposition Source	Clustex	
Turpentine Oil	Turpentine, Oil of Turpentine	Solvent	-	
Vanadium Oxide	VO	Deposition Source	Clustex	
Xylene	Xylene	Solvent	-	
Ytterbium	Yb	Deposition Source	EBE	
ZDMAC	ZDMAC	EBL Stripper	-	
ZED-N50	ZED-N51	EBL Developer	-	
ZEP520	ZEP521	EBL Resist	-	

Zinc Oxide	ZnO	Deposition Source	RF Sputter
Zirconium	Zr	Deposition Source	DC Sputter
Zirconium Oxide	Zirconia, ZrO2	Deposition Source	Clustex