

# SMFL Chemistry SDS's

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## SMFL SDS Listing - Standard Chemistry

Below is a listing of standard chemistry found in the cleanroom.

Chemistry is listed by grouping

If you don't know the type - do a search on this page - by pushing Control F

[Researcher Chemistry SDS's can be found here](#)

### Acids

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS Link
Acetic Acid	Combustible/Corrosive/Toxic	Sigma Aldrich	4/26/12	<a href="#">SDS</a>
Hydrofluoric Acid	Toxic/Corrosive	Avantor	6/18/14	<a href="#">SDS</a>
Hydrochloric Acid	Corrosive	Avantor	2/2/15	<a href="#">SDS</a>
Phosphoric Acid	Corrosive	Avantor	6/24/15	<a href="#">SDS</a>
Nitric Acid	Corrosive	Avantor	6/4/14	<a href="#">SDS</a>
Sulfuric Acid	Corrosive	Avantor	2/2/15	<a href="#">SDS</a>

### Bases

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS Link
Ammonium Hydroxide	Corrosive	Avantor	3/4/15	<a href="#">SDS</a>
Potassium Hydroxide	Corrosive	Avantor	6/5/14	<a href="#">SDS</a>
Sodium Hydroxide	Corrosive	Ricca	5/4/15	<a href="#">SDS</a>

### Specialty Etchants

Chemical/Trade Name	Ingredient of Concern	Main Hazard	Manufacturer	Rev	SDS Link
Aluminum Etch 16-1-1-2	Phosphoric Acid	Corrosive	Fuji Film	12/6/18	<a href="#">SDS</a>
Aluminum Etch Type D	Phosphoric Acid	Toxic	Transene	7/1/13	<a href="#">SDS</a>
Buffered Oxide Etch 10: 1 (BOE)	Hydrofluoric Acid	Toxic	Avantor	11/13/14	<a href="#">SDS</a>
Buffered Oxide Etch 10: 1 (BOE) w/ Surfactant	Hydrofluoric Acid	Toxic	Fuji Film	8/5/14	<a href="#">SDS</a>
Buffered Oxide Etch 5: 1 (BOE) w/ Surfactant	Hydrofluoric Acid	Toxic	Transene	7/1/13	<a href="#">SDS</a>
Chrome Etch 9048S	Perchloric Acid	Corrosive	Transene	5/1/19	<a href="#">SDS</a>
Ferric Chloride	Hydrochloric Acid	Corrosive	MG Chemicals	8/16/13	<a href="#">SDS</a>
Freckle Etch	Fluoroboric Acid	Corrosive	Fuji Film	9/25/17	<a href="#">SDS</a>
Gold Etch TFA	Hydrochloric Acid	Corrosive/Toxic	Transene	4/1/13	<a href="#">SDS</a>
Pad Etch	Ammonium Fluoride	Toxic	Fuji Film	10/4/18	<a href="#">SDS</a>

### Photoresists / Lithographic Chemicals

Chemical/Trade Name	Ingredient of Concern	Main Hazard	Manufacturer	Rev	SDS Link
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Hexamethyldisilazane	Hexamethyldisilazane	Combustible/Corrosive /Toxic	Avantor	6/8/14	SDS
LOR A Resists	Cyclopentanone	Combustible - Irritant	MicroChem	10/7/14	SDS
LOR B Resists	Cyclopentanone	Combustible - Irritant	MicroChem	4/19/12	SDS
MiR 701 Photoresist	Ethyl Lactate	Combustible - Irritant	AZ/Merck	8/13/15	SDS
nLOF 2020 Photoresist	PGMEA	nLOF 2020 Photoresist	AZ/Merck	4/17/15	SDS
Microposit S1805 Photoresist	PGMEA	Combustible - Irritant	Dow/ Rohm& Haas	7/22/15	SDS
Microposit S1813 Photoresist	PGMEA	Combustible - Irritant	Dow/ Rohm& Haas	7/22/15	SDS
Microposit S1827 Photoresist	PGMEA	Combustible - Irritant	Dow/ Rohm& Haas	2/25/15	SDS
MicroChem SU-8 2000 Photoresist	Gamma Butyrolactone	Combustible - Irritant	MicroChem	7/16/13	SDS
MicroChem SU-8 3000 Photoresist	Gamma Butyrolactone	Combustible - Irritant	MicroChem	7/16/13	SDS

## Developers - Alkaline & Solvent

Chemical/Trade Name	Ingredient of Concern	Main Hazard	Manufacturer	Rev	SDS Link
CD-26 Developer	Tetramethyl Ammonium Hydroxide	Toxic	Dow/ Rohm& Haas	4/6/15	SDS
Microposit 351 Developer	Sodium Hydroxide	Corrosive	Dow/ Rohm& Haas	3/11/15	SDS
SU8 Developer	PGMEA	Combustible - Irritant	MicroChem	2/22/12	SDS

## Solvents/Strippers

Chemical/Trade Name	Ingredient of Concern	Main Hazard	Manufacturer	Rev	SDS Link	Data Sheet
Acetone	Acetone	Flammable - Irritant	Avantor	6/17/14	SDS	
BTS-220	Propylene Glycol Methyl Ether Acetate	Flammable - Irritant	JT Baker	9/17/14	SDS	
Chloroform	Chloroform	Combustible / Toxic	JT Baker	6/12/14	SDS	
Ethanol	Ethanol	Flammable	Pharmco	5/8/14	SDS	
Isopropanol	Isopropanol	Flammable - Irritant	Avantor	6/23/14	SDS	
Methanol	Methanol	Flammable - Toxic	Avantor	4/2/15	SDS	
Nano Remover PG	N-Methyl Pyrrolidinone	Combustible - Irritant	Microchem	12/16/14	SDS	
NMP	N-Methyl Pyrrolidinone	Combustible - Irritant	BDH - VWR	3/23/15	SDS	
PRS2000	N-Methyl Pyrrolidinone	Combustible - Irritant	Avantor	6/8/14	SDS	Data Sheet for PRS 2000
RER 600	Propylene Glycol Methyl Ether Acetate	Flammable - Irritant	Fuji Film	2/4/19	SDS	
SU8 Thinner	Cyclopentanone	Flammable - Irritant	MicroChem	7/2/13	SDS	
Xylene	Xylene	Flammable - Irritant	Millipore	10/30/14	SDS	

## Etch Gases

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS Link
Argon	Asphyxiant	Matheson/Air Gas	12/10/15	SDS
Boron Trichloride	Toxic/Corrosive	Matheson/Air Products	9/6/15	SDS

Chlorine	Toxic/Corrosive	Air Products	7/28/15	<a href="#">SDS</a>
Difluoromethane R32 (CH <sub>2</sub> F <sub>2</sub> )	Asphyxiant	Airgas	8/15/15	<a href="#">SDS</a>
Hexafluoroethane R116 (C <sub>2</sub> F <sub>6</sub> )	Asphyxiant	Airgas	4/16/13	<a href="#">SDS</a>
Helium	Asphyxiant	Airgas	5/1/15	<a href="#">SDS</a>
Nitrogen	Asphyxiant	Airgas	8/7/15	<a href="#">SDS</a>
Oxygen	Oxidizer	Matheson	12/10/2015	<a href="#">SDS</a>
Sulfur Hexafluoride	Asphyxiant	Air Products	9/6/15	<a href="#">SDS</a>
Tetrafluoromethane (CF <sub>4</sub> )	Asphyxiant	Airgas	5/17/2015	<a href="#">SDS</a>
Trifluoromethane (CHF <sub>3</sub> )	Asphyxiant	Airgas	10/20/14	<a href="#">SDS</a>
Xenon Difluoride	Oxidizer	Air Products	1/21/15	<a href="#">SDS</a>

## Deposition / Implant Gases

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS Link
Ammonia	Inhalation Hazard	Air Products	9/6/15	<a href="#">SDS</a>
Boron Trifluoride	Corrosive/Toxic	Air Liquide/Voltaix	9/22/15	<a href="#">SDS</a>
Dichlorosilane	Pyrophoric/Toxic	Air Products	9/6/15	<a href="#">SDS</a>
Fluorine (5%) Argon Balance	Corrosive/Toxic	Airgas	3/14/14	<a href="#">SDS</a>
Helium / Oxygen	Asphyxiant	Airgas	10/15/14	<a href="#">SDS</a>
Hydrogen	Flammable	Matheson	3/14/14	<a href="#">SDS</a>
Methane	Flammable	Airgas	12/5/13	<a href="#">SDS</a>
Nitrous Oxide	Oxidizer	Airgas	5/20/15	<a href="#">SDS</a>
Octafluorocyclobutane (C <sub>4</sub> F <sub>8</sub> )	Asphyxiant	Airgas	1/26/15	<a href="#">SDS</a>
Octafluoropropane (C <sub>3</sub> F <sub>8</sub> )	Asphyxiant	Matheson	6/13/12	<a href="#">SDS</a>
Phosphine	Pyrophoric/Toxic	Air Liquide/Voltaix	11/6/15	<a href="#">SDS</a>
Silane	Pyrophoric	Air Products	9/6/15	<a href="#">SDS</a>

## ALD Gases

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS Link
Trimethylaluminum	Flammable/Corrosive	Strem	4/25/14	<a href="#">SDS</a>
Diethylzinc	Flammable/Corrosive	Strem	4/25/14	<a href="#">SDS</a>
Tetrakis Titanium	Flammable/Corrosive	Strem	8/1/16	<a href="#">SDS</a>

## Other

Chemical/Trade Name	Main Hazard	Manufacturer	Rev	SDS in System	SDS Link
CA-40 Mask Cleaner	Irritant	Cyantek	11/5/03	x	<a href="#">MSDS</a>
Glycerol	Irritant	Avantor	4/24/14		<a href="#">SDS</a>
Hydrogen Peroxide	Oxidizer	Avantor	6/11/14		<a href="#">SDS</a>
Parylene	Flammable	SCS	3/27/15		<a href="#">SDS</a>
Tetraethyl Orthosilicate (TEOS)	Flammable	Air Products	1/8/16		<a href="#">SDS</a>
Trans LC	Irritant	Schumacher	9/6/15		<a href="#">SDS</a>

## Metals / Deposition Materials

Chemical/Trade Name	Manufacturer	Rev	MSDS Link
Aluminum	Lesker		<a href="#">SDS</a>
Aluminum Oxide	Lesker		<a href="#">SDS</a>
Chromium	Lesker		<a href="#">SDS</a>
Copper	Lesker		<a href="#">SDS</a>
Gallium Oxide	Sigma Alrich	6/25/14	<a href="#">SDS</a>
Gold	Lesker		<a href="#">SDS</a>
Hafnium	Lesker		<a href="#">SDS</a>
Hafnium Oxide	Lesker		<a href="#">SDS</a>
Indium	Lesker		<a href="#">SDS</a>
Indium Oxide	Lesker		<a href="#">SDS</a>
Indium Tin Oxide	Lesker		<a href="#">SDS</a>
Molybdenum	Lesker		<a href="#">SDS</a>
Nickel	Lesker		<a href="#">SDS</a>
Palladium	Lesker		<a href="#">SDS</a>
Platinum	Lesker		<a href="#">SDS</a>
Silicon	Lesker		<a href="#">SDS</a>
Silicon Dioxide	Lesker		<a href="#">SDS</a>
Silicon Nitride	Lesker		<a href="#">SDS</a>
Tantalum	Lesker		<a href="#">SDS</a>
Titanium	Lesker		<a href="#">SDS</a>
Tungsten	Lesker		<a href="#">SDS</a>
Zinc Oxide	Lesker		<a href="#">SDS</a>

## SMFL Materials

Chemical/Trade Name	Used In	Manufacturer	Rev	SDS Link
DPD Free Chlorine Reagent	Water Testing		3/4/14	<a href="#">SDS</a>
Ethylene Glycol	Coolant	Sigma Aldrich	2/26/15	<a href="#">SDS</a>
Fomblin 16/6 Vacuum Oil	Vacuum Pumps	Inland	9/19/14	<a href="#">SDS</a>
Fomblin 25/6 Vacuum Oil	Vacuum Pumps	Inland	9/19/14	<a href="#">SDS</a>
Leybonol LVO 400 Vacuum Oil	Vacuum Pumps	Oerlikon Leybold	5/10/09	<a href="#">SDS</a>
Inland 45 Oil	Vacuum Pumps	Inland	1/1/15	<a href="#">SDS</a>
Inland FF10 Flushing Fluid	Vacuum Pumps	Inland	6/1/15	<a href="#">SDS</a>
Inland TP 500 Oil	Vacuum Pumps	Inland	1/1/10	<a href="#">MSDS</a>
Inland TW Oil	Vacuum Pumps	Inland	6/1/15	<a href="#">SDS</a>
Invoil 20 Oil	Vacuum Pumps	Inland	6/1/15	<a href="#">SDS</a>
Invoil 704 Oil	Vacuum Pumps	Inland	7/1/15	<a href="#">SDS</a>
Propylene Glycol	Coolant	Dow	4/21/15	<a href="#">SDS</a>
Ice Block	Coolant	Hillside Chem	3/25/14	<a href="#">SDS</a>
Novaclean - Floor & Lab	Lab Cleaning	Micronova	6/15/15	<a href="#">SDS</a>