APPENDIX F
COMMON ORGANIC SOLVENTS AND GASES DATA SHEET

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{O}C)*	I.P. (EV)**	TWA (PPM)***
Acetaldehyde	44.05	0.788	21	10.21	
Acetamide	59.07	1.159	221	9.77	
Acetic Acid	60.05	1.049	116-117	10.37	10
Acetic Anhydride	102.1	1.10	138-117	9.88	5
Acetone	58.1	0.79	56	9.69	1000
Acetonitrile	41.1	0.79	82	12.22	40 cell
Acetophenone	120.15	1.033	202	9.27	
Acetyl Bromide	122.96	1.52	75-75	10.55	
Acetyl Chloride	78.50	1.104	52	11.02	
Acetylene	26.02	0.90		11.41	
Acrolein	56.06	0.8389	53	10.10	0.1
Acrylonitrile	53.06	0.8004	77	10.91	10
Allyl Alcohol	58.1	0.85	96-98	9.67	2
Allyl Chloride	76.5	0.94	44-46	9.9	1
Aniline	93.1	1.02	184	7.70	5
Anisole	108.13	0.9956	154	8.22	
Ammonia	17.03	gas		10.15	
Arsine	77.9	gas			
Benzaldelyde	106.12	1.053	178-185	9.53	
Benzene	78.1	0.88	80	9.25	1
Benzonitrile	103.12	1.010	188	9.71	
Benzotriflouride	146.11	1.1886	102	9.68	
Benzyl Chloride	126.6	1.10	177-181	9.14	1
Biphenyl	154.21	0.992	255		
Bromine	159.81	3.1023	58.8	10.55	
Bromobenzene	157.02	1.495	156	8.98	
1-Bromobutene	137.03	1.276	100-04	10.13	
2-Bromobutene	137.03	1.255	91	9.98	
1-Bromo-2-Chlorethene	143.42	1.723	106-07	10.63	
Bromochloromethane	129.39	1.991	68	10.77	
1-Bromo-2-Flourobenzene	175.01	1.593	150	8.99	
Bromoform	252.8	2.9	150-01	10.47	0.5
1-Bromo-2-methyl propane	137.03	1.260	90-92	10.09	
2-Bromo-2-methyl propane	137.03	1.189	72-74	9.89	
1-Bromopentane	151.05	1.218	130	10.10	
2-Bromopropane	123.00	1.354	71	10.18	
2-Bromopropene	123.00	1.310	59	10.08	
1-Bromopropene	120.98	1.413	58-63	9.30	
3-Bromopropene	120.98	1.398	70-71	9.70	
2-Bromothiophene	163.04	1.684	149-151	8.63	
M-Bromotoluene	171.04	1.4099	183.7	8.81	
O-Bromotoluene	171.04	1.431	58.60	8.79	
P-Bromotoluene	171.04	1.431	184	8.67	
1,3-Butadiene	54.1	gas	9.07		1000
Butane	58.12	gas	10.63		
	90.19	.842	9.14		

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{o}C)*	I.P. (EV)**	TWA (PPM)***
2-Butanone	72.1	0.81	80	9.53	200
1-Butene	56.10	0.6255		9.58	
N-Butyl Acetate	116.2	0.88	124-26	10.01	150
S-Butyl Acetate	116.2	0.88	111-12	9.91	150
N-Butyl Alcohol	74.1	0.81	117.7	10.04	100
N-Butyl Amine	73.1	0.73	73	78	5
S-Butyl Amine	73.1	0.73	63	8.70	5
T-Butyl Amine	73.1	0.73	46	8.64	5
N-Butyl Benzene	134.21	0.8604	183	8.69	
S-Butyl Benzene	134.21	0.8604	173-04	8.68	
T-Butyl Benzene	134.21	0.8669	169	8.68	
N-Butyraldehyde	72.10	0.8016	75	9.86	
N-Butyric Acid	88.10	0.959	162	10.16	
N-Butyronitrile	69.10	0.7954	115-17	11.67	
Camphor	152.2	0.99	204	8.76	2 mg/m
Carbon Dioxide	44.01	gas		13.79	5000
Carbon Monoxide	28.01	gas		14.01	50
Carbon Tetrachloride	153.8	1.59	77	11.47	10
Chlorine	70.90	gas		11.48	1 cell
Chlorobenzene	112.6	1.10	132	9.07	75
Chloroform	119.4	1.48	60.5-61.5	11.37	50 cell
1-Chloro-2-Methylpropane	92.57	.883	68-69	10.66	
2-Chloro-2-Methylpropane	101.64	.851	51-52	10.61	
1-Chloropropane	78.54	.892	46-47	10.82	
2-Chloropropane	78.54	.859	34-36	10.78	
3-Chloropropane	76.53	.939	44-46	10.04	
2-Chlorothiophene	118.59	1.286	127-29	8.68	
M-Chlorotoluene	126.58	1.076	160-162	8.83	
O-Chlorotoluene	126.58	1.0826	157-159	8.83	
P-Chlorotoluene	126.58	1.0697	162	8.70	
M-Cresol	108.1	1.034	203	8.52	5 cell
O-Cresol	108.1	1.048	191	8.50	5 cell
P-Cresol	108.1	1.034	202	8.38	5 cell
Crotonaldehyde	70.09	0.853	104	9.73	2
Cumene	120.2	0.86	152-154	8.75	50
Cyanogen	52.04	0.9537		13.80	
Cyclohexane	84.2	0.81	80.7-81	9.98	300
Cyclohexane	100.2	0.96	160-161	10.0	50
Cyclohexanone	98.1	0.95	155	9.14	50
Cyclohexene	82.1	0.81	83	8.95	300
Cyclo-Octatetraene	104.15	0.925	142-43	7.99	
Cyclopentane	70.13	0.7460	50	10.53	
Cyclopentanone	84.11	1.4366	130-131	9.26	
Cyclopentene	68.12	0.744	44	9.01	
Cyclopropane	42.08	gas		9.91	
Diborane	27.68	gas		11.00	
Diazomethane	42.0	gas		9.0	0.2

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{O}C)*	I.P. (EV)**	TWA (PPM)**
Dibromodiflouromethane	209.83	2.297	22-23	11.07	
1,2-Dibromoethane	187.87	2.180	131-32	9.45	
1,3-Dibromopropane	201.90	1.937	167	10.07	
Dibutylphthlate	278.3	1.04	340		5 mg/m
M-Dichlorobenzene	147.01	1.288	172-73	9.12	50
O-Dichlorobenzene	147.01	1.306	179-180	9.07	50
P-Dichlorobenzene	147.01	1.241	173	8.94	75
1,1-Dichlorethane	99.0	1.18	57	11.06	100
1,2-Dichlorethane	98.96	1.256	83	11.12	
1,2-Dichlorethylene	97.0	1.28	46-60	9.66	
Dichloromethane	84.93	1.325	39.8-40	11.35	
1,2-Dichloropropane	112.99	1.156	95-96	10.87	
1,3-Dichloropropane	112.99	1.190	120-22	10.85	
2,3-Dichloropropane	110.97	1.204	94	9.82	
N,N-Diethyl Acetamide	115.18	0.925	182-86	8.60	
Diethylamine	73.1	0.71	55	8.01	25
Diethyl Ether	74.12	0.7134	34.6	9.53	
N.N-Diethyl Formamide	101.15	0.908	176-77	8.89	
Diethyl Ketone	86.13	0.816	102	9.32	
Diethyl Sulfide	90.19	.837		8.43	
Diethyl Sulfite	138.19	1.883	158-60	9.68	
Dihydropyran	84.12	0.922	86	8.34	
Diisopropylamine	101.2	0.72	84	7.73	5
1,1-Dimethoxyethane	90.12	0.863	64	9.65	
N,N-Dimethyl Acetamide	87.12	0.937	164.5-66	8.81	10
Dimethyl Amine	45.1	0.68		8.24	10
N,N-Dimethyl Aniline	122.2	0.96	193-94	7.13	
2,2-Dimethyl Butane	86.18	0.649	50	10.06	
2,3-Dimethyl Butane	86.18	0.662	50	10.02	
3,3-Dimethyl Butanone	100.16	0.801	106	9.17	
N,N-Dimethyl Formamide	73.09	0.9445	153	9.12	10
Dimethlyl Sulfide	63.13	0.846	38	8.69	
P-Dioxane	88.1	1.03	100-102	9.13	
Dipropyl Amine	101.19	0.738	105-110	7.84	
Durene	134.12	0.84	80-82	8.03	
Epichlorohydrin	92.5	1.18	115-117		5
Ethane	30.07	gas		11.65	
Ethanethiol	62.13	0.8315	35	9.29	
Ethyl Acetate	88.1	0.90	76.5-77.5	10.11	400
Ethyl Alcohol	46.1	0.80	78	10.48	1000
Ethyl Amine	45.1	0.69	19.20	8.86	10
Ethyl Benzene	106.2	0.87	136	8.76	100
Ethyl Bromide	109.0	1.45	37-40	10.29	200
Ethyl Butyl Ketone	114.2	0.82	146-49	9.02	50
Ethyl Chloride	64.52	0.9214		10.98	1000
Ethyl Disulfide	122.25	0.993	153	8.27	
Ethylene Dibromide	187.9	2.17	131-132	10.52	20
Ethylene Dichloride	99.0	1.26	83	11.32	50

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{o}C)*	I.P. (EV)**	TWA (PPM)**
Ethyl Ether	74.1	0.73	34.6	9.59	400
Ethyl Formate	74.1	0.92	52-54	10.61	100
Ethyl Iodide	155.98	1.950	67-73	9.33	
Ethyl Isothiocyanate	87.15	1.003	60	9.14	
Ethyl Methyl Sulfide	76.16	0.842	66-67	8.55	
Ethyl Nitrate	75.07	0.90	112	11.22	
Ethyl Propionate	102.13	0.891	99	10.00	
Ethyl Thiocyanate	87.14	1.007		9.89	
Ethynylbenzene	102.13	0.9300	142-44	8.82	
Fluorine	37.99	gas		15.70	
Flourobenzene	96.10	1.024	85	9.20	
O-Fluorophenol	112.10	1.256	172-74	8.95	
M-Fluorotoluene	110.13	0.997	178	8.92	
O-Fluorotoluene	110.13	1.004	172-172	8.92	
P-Fluorotoluene	110.13	1.001	185	8.79	
Formaldehyde	30.03	1.083		10.87	3
Formahide	45.04	1.1334	210	10.25	
Formic Acid	46.02	1.220	110-101	11.05	
2-Furaldehyde	96.09	1.160	182	9.21	
Furan	68.07	0.9371		8.89	
Heptane	100.2	0.68	98	10.08	
2-Heptanone	114.18	0.8068	149-50	9.33	
Hexane	86.2	0.66	68-69	10.18	500
1-Hexane	84.16	0.673	64	9.46	
Hexone	100.2	0.80		9.53	
Hydrogen	2.017	gas		15.43	
Hydrogen Bromide	80.92	gas		11.62	3
Hydrogen Chloride	36.47	gas		12.74	5 cell
Hydrogen Cyanide	27.03	0.687		13.91	10
Hydrogen Flouride	20.01	gas		15.77	3
Hydrogen Iodide	127.93	gas		10.38	
Hydrogen Selenide	80.98	gas		9.88	0.05
Hydrogen Sulfide	34.08	gas		10.46	20 cell
Hydrogen Telluride	129.63	gas		9.14	
Iodine	253.81	4.93		9.28	0.1 cell
Iodobenzene	204.02	1.8384	188	8.73	
1-Iodobutene	184.02	1.617	130-31	9.21	
2-Iodobutene	184.02	1.4991	119-120	9.09	
1-Iodo-2-Methylpropane	184.02	1.599	120-21	9.18	
1-Iodopentane	198.05	1.517	154-55	9.19	
1-Iodopropane	169.99	1.743	101-02	9.26	
2-Iodopropane	169.99	1.703	88-90	9.17	
O-Iodotoluene	218.04	1.713	211	8.62	
M-Iodotoluene	218.04	1.698		8.61	
P-Odotoluene	218.04		211-5	8.50	
Isoamyl Acetate	130.2	0.88	142	9.94	
Isoamyl Alcohol	88.2	0.81	130-1	10.42	

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{O}C)*	I.P. (EV)**	TWA (PPM)**
Isobutyl Amine	73.14	0.724	64-71	8.70	
Isobutyl Formate	102.13	0.885	98.4	10.46	
Isobutylene	56.11	0.5942	-6.9	9.23	
Isobutyraldehyde	72.11	0.794	63	9.74	
Isobutyric Acid	88.11	0.950	153-54	10.02	
Isoctane	114.2	0.70	98-99	17.9	
Isopentane	114.23	0.692	30	10.32	
Isoprene	68.12	0.681	34	8.85	
Isopropyl Acetate	102.1	0.87	85	9.99	250
Isopropyl Alcohol	60.1	0.79		10.16	400
Isopropyl Amine	59.1	0.69	33-34	8.72	5
Isopropyl Benzene	120.2	0.86	152-54	8.75	50
Isopropyl Ether	102.2	1.37	68-69	9.20	500
Isovaleraldehyde	86.13	0.785	90	9.71	
2,3-Lutidine	107.15	0.945	162-63	8.85	
2,4-Lutidine	107.15	0.927	159	8.85	
2,6-Lutidine	107.15	0.9252	143-45	8.85	
Malaic Anhydride	98.1	0.93	200	11.1	
Mesitylene	120.19	0.8637	162-64	8.40	
Mesityl Oxide	98.14	0.8592	129	9.08	
Methane	16.04	gas		12.98	
Methanethiol	48.11	0.96		9.44	
N-Methyl Acetamide	73.10	0.957	204-05	8.90	
Methyl Acetate	74.08	0.9279	57.5	10.27	
Methyl Acrylate	86.1	0.96	80	9.9	10
Methyl Amine	31.06	gas	48	8.97	
Methyl Bromide	95.0	gas		10.53	
2-Methyl-1-Butane	70.16	0.650	31	9.12	
3-Methyl-1-Butane	70.14	0.627	20	9.51	
3-Methyl-2-Butane	70.14	0.643		8.67	
Methyl Butyl Ketone	100.6	0.83	127	9.34	
Methyl Butyrate	102.13	0.898	102-103	10.07	
Methyl Chloride	50.5			11.28	
Methyl Cyclohexane	98.19	0.770	101	9.85	
Methyl Disulfide	94.20	1.046	109	8.46	
Methyl Ethyl Ketone	72.10	0.805	80	9.53	
Methyl Formate	60.1	1.34	34	10.815	100
2-Methyl Furan	82.10	0.827	63-66	8.39	
Methyl Iodide	142.0	2.28	41-43	9.54	5
Methyl Isobutyl Ketone	100.2	0.80	117-18	9.30	100
Methyl Isobutyrate	102.13	0.891	90	9.98	
Methyl Isopropyl Ketone	86.12	0.805	94-95	9.32	
Methyl Isothiocyanate	73.12		37-39	9.25	
Methyl Methacrylate	100.1	0.94	100	9.9	100
1-Methyl Napthalene	142.20	1.001	240-243	7.96	
2-Methyl Napthalene	142.20	1,000	241-242	7.96	
2-Methyl Pentane	86.18	0.653	62	10.12	
3-Methyl Pentane	86.18	0.664	64	10.08	
Methyl Propionate	88.11	0.915	79	10.15	

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{O}C)*	I.P. (EV)**	TWA (PPM)**
Methyl Propyl Ketone	86.13	0.809	100.01	9.38	
2-Methyl Styrene	165.4	1.068	131	10.07	
Monomethyl Aniline	107.16	0.989			
Monomethyl Hydrazine	46.1	0.87			
Morpholine	87.1	1.01	129	8.88	20
Nephthalene	93.7	1.16	217.7	8.12	10
Nitric Oxide	162.2	1.01		9.25	
P-Nitroaniline	138.1				1.0
Nitrobenzene	123.1	1.21	210-211	9.92	1.0
4-Nitrobiphenyl	199.2				
P-Nitrochlorobenzene	157.6	1.52		9.96	1.0 mg/m
Nitrogen Dioxide	46.01	1.448		9.78	
Nitroethane	75.1	1.38	112	10.81	100
Nitromethane	61.0	1.13	100.8-101	11.08	100
1-Nitropropane	89.1	0.99	131-32	10.88	25
2-Nitropropane	89.1	0.98	120	10.71	25
N-Nitrosodimethylamine	74.1	1.00	153	9.07	
Nitrotoluene	137.1	1.16	225-238	11.63	5
Oxygen	31.9988	gas		12.08	
Ozone	48.00	gas		12.08	
Pentaborane	63.17	0.61		10.40	
Pentane	72.15	0.62638	35	10.35	
2,4-Pentanedione	70.13	0.6429	140.4	8.87	
1-Pentene	70.13	0.6503	29.9-30.1	9.50	
Phenetol	122.16	0.967	169-70	8.13	
Phenol	94.1	1.07	182	8.50	5
Phenyl Hydrazine	108.1	1.1	238-41	7.86	5
Phenyl Isocyanate	119.12	1.0887	162-63	8.77	
Phenyl Isothiocyanate	135.18	1.1288	221	8.52	
Phosgene	98.9	gas		11.77	0.4 mg/m
Phosphine	34.0	gas			0.3
Phosphorous Pentachloride	208.2	1.6		10.7	1 mg/m
Phosphorous Trichloride	137.3	1.57	76	10.5	
2-Picoline	93.12	0.950	128-29	9.02	
3-Picoline	93.12	0.9613	144	9.02	
4-Picoline	93.12	0.9571	145	9.04	
Propane	44.09	gas		11.07	
1-Propanethiol	76.16	0.841	67-68	9.20	
Propiolactone	72.06	1.146	162	9.70	
Propionic Acid	74.08	0.99336	141	10.24	
Propionaldehyde	58.08	0.8071	46-50	9.98	
Propionitrile	55.08	0.7818	97	11.84	
N-Propyl Acetate	102.1	0.84	120	10.04	200
Propyl Alcohol	60.10	0.804	97	10.20	
Propyl Amine	59.11	0.719	48	8.78	
Propyl Benzene	120.20	0.862	159	8.72	
Propylene	42.08	gas		8.73	
Propylene Oxide	58.08	0.859	34	10.22	

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million

CHEMICAL MATERIALS	F.W. (G/MOLE)	DENSITY (G/ML)	BP (^{O}C)*	I.P. (EV)**	TWA (PPM)***
Methyl Propyl Ketone	86.13	0.809	100.01	9.38	
2-Methyl Styrene	165.4	1.068	131	10.07	
Monomethyl Aniline	107.16	0.989			
Monomethyl Hydrazine	46.1	0.87			
Morpholine	87.1	1.01	129	8.88	20
Napthalene	93.7	1.16	217.7	8.12	10
Propyl Ether	102.17	0.7360	88.90	9.27	
Propyl Formate	88.10	0.901		10.54	
Pyrene	202.3	gas		7.41	
Pyridine	79.1	0.98	115	9.32	5
Pyrrole	67.09	0.9691	131	8.20	
Styrene	104.14	9.9059	145-146	8.47	
Styrene Oxide	120.2	1.054	194	9.04	
Tetrachloroethylene	165.9	1.63	121	9.32	100
Tetrahydrofuran	72.10	0.8892	67	9.54	
Tetrahydropyran	86.13	0.8814	88	9.26	
Thiophene	84.1	1.53	84	8.86	
Toluene	93.13	0.866	111	8.82	
O-Toluidine	107.2	1.01	199-200	7.44	5
Trichloroethene	131.40	1.4649	87	9.45	
Triethylamine	101.19	1.069	88.18	7.50	
Trimethyl Amine	59.11	0.636	3-4	7.82	
2,2,4-Trimethyl Pentane	114.23	0.692	98-99	9.86	
Tripropyl Amine	143.27	0.753	155-58	7.23	
Valeraldehyder	86.13	0.8095	103	9.82	
Valeric Acid	102.13	0.939	185	10.12	
Vinyl Acetate	118	0.94	72-73	9.19	10
Vinyl Bromide	106.96	1.517	16	9.80	
Vinyl Chloride	62.5	gas		10.00	1
Water	18.016	1.00	100	12.59	
M-Xylene	106.16	0.8684	138-39	8.56	100
O-Xylene	106.16	0.8801	143-45	8.56	100
P-Xylene	106.16	0.8614	138	8.45	100

* BP - Boiling Point Degrees Centigrade
** IP - Ionization Potential
*** TWA - Time Weighted Average = Parts Per Million