

TABLE 2-8 Vapor Pressure of Inorganic and Organic Liquids, $\ln P = C1 + C2/T + C3 \ln T + C4 T^{C5}$, P in Pa

No.	Name	Formula	CAS no.	C1	C2	C3	C4	C5	T_{\min} , K	P at T_{\min}	T_{\max} , K	P at T_{\max}
1	Acetaldehyde	C ₂ H ₄ O	75-07-0	193.69	-8,036.7	-29.502	4.3678E-02	1	150.15	3.23E-01	466	5.565E+06
2	Acetamide	C ₂ H ₅ NO	60-35-5	125.81	-12,376	-14.589	5.0824E-06	2	353.33	3.36E+02	761	6.569E+06
3	Acetic acid	C ₂ H ₄ O ₂	64-19-7	53.27	-6,304.5	-4.2985	8.8865E-18	6	289.81	1.28E+03	591.95	5.739E+06
4	Acetic anhydride	C ₄ H ₆ O ₃	108-24-7	100.95	-8,873.2	-11.451	6.1316E-06	2	200.15	2.20E-02	606	3.970E+06
5	Acetone	C ₃ H ₆ O	67-64-1	69.006	-5,599.6	-7.0985	6.2237E-06	2	178.45	2.79E+00	508.2	4.709E+06
6	Acetonitrile	C ₂ H ₃ N	75-05-8	58.302	-5,385.6	-5.4954	5.3634E-06	2	229.32	1.87E+02	545.5	4.852E+06
7	Acetylene	C ₂ H ₂	74-86-2	39.63	-2,552.2	-2.78	2.3930E-16	6	192.4	1.27E+05	308.3	6.106E+06
8	Acrolein	C ₃ H ₄ O	107-02-8	138.4	-7,122.7	-19.638	2.6447E-02	1	185.45	1.03E+01	506	5.020E+06
9	Acrylic acid	C ₃ H ₄ O ₂	79-10-7	46.745	-6,587.1	-3.2208	5.2253E-07	2	286.15	2.57E+02	615	5.661E+06
10	Acrylonitrile	C ₃ H ₃ N	107-13-1	87.604	-6,392.7	-10.101	1.0891E-05	2	189.63	3.68E+00	535	4.480E+06
11	Air	Mixture	132259-10-0	21.662	-692.39	-0.392	4.7574E-03	1	59.15	5.64E+03	132.45	3.793E+06
12	Ammonia	H ₃ N	7664-41-7	90.483	-4,669.7	-11.607	1.7194E-02	1	195.41	6.11E+03	405.65	1.130E+07
13	Anisole	C ₇ H ₈ O	100-66-3	128.06	-9,307.7	-16.693	1.4919E-02	1	235.65	2.45E+00	645.6	4.273E+06
14	Argon	Ar	7440-37-1	42.127	-1,093.1	-4.1425	5.7254E-05	2	83.78	6.87E+04	150.86	4.896E+06
15	Benzamide	C ₇ H ₇ NO	55-21-0	85.474	-11,932	-8.3348	1.2850E-18	6	403	3.55E+02	824	5.047E+06
16	Benzene	C ₆ H ₆	71-43-2	83.107	-6,486.2	-9.2194	6.9844E-06	2	278.68	4.76E+03	562.05	4.875E+06
17	Benzenethiol	C ₆ H ₆ S	108-98-5	77.765	-8,455.1	-7.7404	4.3089E-18	6	258.27	7.68E+00	689	4.728E+06
18	Benzoic acid	C ₇ H ₆ O ₂	65-85-0	88.513	-11,829	-8.6826	2.3248E-19	6	395.45	7.96E+02	751	4.469E+06
19	Benzonitrile	C ₇ H ₅ N	100-47-0	138.5	-11,195	-17.085	9.5641E-06	2	260.4	3.08E+00	699.35	4.243E+06
20	Benzophenone	C ₁₃ H ₁₀ O	119-61-9	88.404	-11,769	-8.9014	1.9334E-18	6	321.35	1.49E+00	830	3.357E+06
21	Benzyl alcohol	C ₇ H ₈ O	100-51-6	100.68	-11,059	-10.709	3.0582E-18	6	257.85	1.88E-01	720.15	4.372E+06
22	Benzyl ethyl ether	C ₉ H ₁₂ O	539-30-0	68.541	-7,886.2	-6.5804	2.4285E-06	2	275.65	2.31E+01	662	3.113E+06
23	Benzyl mercaptan	C ₇ H ₈ S	100-53-8	118.02	-10,527	-13.91	6.4794E-06	2	243.95	2.98E-01	718	4.074E+06
24	Biphenyl	C ₁₂ H ₁₀	92-52-4	77.314	-9,910.4	-7.5079	2.2385E-18	6	342.2	9.42E+01	773	3.407E+06
25	Bromine	Br ₂	7726-95-6	108.26	-6,592	-14.16	1.6043E-02	1	265.85	5.85E+03	584.15	1.028E+07
26	Bromobenzene	C ₆ H ₅ Br	108-86-1	63.749	-7,130.2	-5.879	5.2136E-18	6	242.43	7.84E+00	670.15	4.520E+06
27	Bromoethane	C ₂ H ₅ Br	74-96-4	62.217	-5,113.3	-5.9761	4.7174E-17	6	154.55	3.72E-01	503.8	6.290E+06
28	Bromomethane	CH ₃ Br	74-83-9	72.586	-4,698.6	-7.9966	1.1553E-05	2	179.47	1.95E+02	467	7.997E+06
29	1,2-Butadiene	C ₄ H ₆	590-19-2	39.714	-3,769.9	-2.6407	6.9379E-18	6	136.95	4.47E-01	452	4.361E+06
30	1,3-Butadiene	C ₄ H ₆	106-99-0	75.572	-4,621.9	-8.5323	1.2269E-05	2	164.25	6.92E+01	425	4.303E+06
31	Butane	C ₄ H ₁₀	106-97-8	66.343	-4,363.2	-7.046	9.4509E-06	2	134.86	6.74E-01	425.12	3.770E+06
32	1,2-Butanediol	C ₄ H ₁₀ O ₂	584-03-2	103.28	-11,548	-10.925	4.2560E-18	6	220	2.93E-04	680	5.202E+06
33	1,3-Butanediol	C ₄ H ₁₀ O ₂	107-88-0	123.22	-12,620	-13.986	3.9260E-06	2	196.15	3.74E-07	676	4.033E+06
34	1-Butanol	C ₄ H ₁₀ O	71-36-3	106.295	-9,866.4	-11.655	1.0832E-17	6	183.85	2.90E-04	563.1	4.401E+06
35	2-Butanol	C ₄ H ₁₀ O	78-92-2	114.68	-9,850.2	-12.963	1.8738E-17	6	158.45	1.95E-06	535.9	4.182E+06
36	1-Butene	C ₄ H ₈	106-98-9	51.836	-4,019.2	-4.5229	4.8833E-17	6	87.8	6.94E-07	419.5	4.021E+06
37	cis-2-Butene	C ₄ H ₈	590-18-1	72.541	-4,691.2	-7.9776	1.0368E-05	2	134.26	2.72E-01	435.5	4.238E+06
38	trans-2-Butene	C ₄ H ₈	624-64-6	71.704	-4,563.1	-7.9053	1.1319E-05	2	167.62	7.45E+01	428.6	4.100E+06
39	Butyl acetate	C ₆ H ₁₂ O ₂	123-86-4	122.82	-9,253.2	-14.99	1.0470E-05	2	199.65	8.17E-02	575.4	3.087E+06
40	Butylbenzene	C ₁₀ H ₁₄	104-51-8	101.22	-9,255.4	-11.538	5.9208E-06	2	185.3	1.54E-04	660.5	2.882E+06
41	Butyl mercaptan	C ₄ H ₁₀ S	109-79-5	65.382	-6,262.4	-6.2585	1.4943E-17	6	157.46	2.35E-03	570.1	3.973E+06
42	sec-Butyl mercaptan	C ₄ H ₁₀ S	513-53-1	60.649	-5,785.9	-5.6113	1.5877E-17	6	133.02	3.40E-05	554	4.060E+06
43	1-Butyne	C ₄ H ₆	107-00-6	77.004	-5,054.5	-8.5665	1.0161E-05	2	147.43	1.18E+00	440	4.599E+06
44	Butyraldehyde	C ₄ H ₈ O	123-72-8	99.33	-7,083.6	-11.733	1.0027E-05	2	176.75	3.17E-01	537.2	4.323E+06
45	Butyric acid	C ₄ H ₈ O ₂	107-92-6	93.815	-9,942.2	-9.8019	9.3124E-18	6	267.95	6.78E+00	615.7	4.071E+06
46	Butyronitrile	C ₄ H ₇ N	109-74-0	66.32	-6,714.9	-6.3087	1.3516E-17	6	161.25	6.18E-04	582.25	3.787E+06
47	Carbon dioxide	CO ₂	124-38-9	140.54	-4,735	-21.268	4.0909E-02	1	216.58	5.19E+05	304.21	7.390E+06
48	Carbon disulfide	CS ₂	75-15-0	67.114	-4,820.4	-7.5303	9.1695E-03	1	161.11	1.49E+00	552	8.041E+06
49	Carbon monoxide	CO	630-08-0	45.698	-1,076.6	-4.8814	7.5673E-05	2	68.15	1.54E+04	132.92	3.494E+06
50	Carbon tetrachloride	CCl ₄	56-23-5	78.441	-6,128.1	-8.5766	6.8465E-06	2	250.33	1.12E+03	556.35	4.544E+06
51	Carbon tetrafluoride	CF ₄	75-73-0	61.89	-2,296.3	-7.086	3.4687E-05	2	89.56	1.08E+02	227.51	3.742E+06
52	Chlorine	Cl ₂	7782-50-5	71.334	-3,855	-8.5171	1.2378E-02	1	172.12	1.37E+03	417.15	7.793E+06
53	Chlorobenzene	C ₆ H ₅ Cl	108-90-7	54.144	-6,244.4	-4.5343	4.7030E-18	6	227.95	8.45E+00	632.35	4.529E+06
54	Chloroethane	C ₂ H ₅ Cl	75-00-3	65.988	-4,661.3	-6.8586	7.9404E-06	2	134.8	1.25E-01	460.35	5.327E+06
55	Chloroform	CHCl ₃	67-66-3	146.43	-7,792.3	-20.614	2.4578E-02	1	207.15	5.25E+01	536.4	5.554E+06
56	Chloromethane	CH ₃ Cl	74-87-3	64.697	-4,048.1	-6.8066	1.0371E-05	2	175.43	8.71E+02	416.25	6.691E+06
57	1-Chloropropane	C ₃ H ₇ Cl	540-54-5	79.24	-5,718.8	-8.789	8.4486E-06	2	150.35	6.96E-02	503.15	4.581E+06
58	2-Chloropropane	C ₃ H ₇ Cl	75-29-6	46.854	-4,445.5	-3.6533	1.3260E-17	6	155.97	9.08E-01	489	4.510E+06
59	m-Cresol	C ₇ H ₈ O	108-39-4	95.403	-10,581	-10.004	4.3032E-18	6	285.39	5.86E+00	705.85	4.522E+06
60	o-Cresol	C ₇ H ₈ O	95-48-7	210.88	-13,928	-29.483	2.5182E-02	1	304.19	6.53E+01	697.55	5.058E+06

TABLE 2-8 Vapor Pressure of Inorganic and Organic Liquids, $\ln P = C1 + C2/T + C3 \ln T + C4 T^{C5}$, P in Pa (Continued)

No.	Name	Formula	CAS no.	C1	C2	C3	C4	C5	T_{\min} , K	P at T_{\min}	T_{\max} , K	P at T_{\max}
61	<i>p</i> -Cresol	C ₇ H ₈ O	106-44-5	118.53	-11,957	-13.293	8.6988E-18	6	307.93	3.45E+01	704.65	5.151E+06
62	Cumene	C ₉ H ₁₂	98-82-8	102.81	-8,674.6	-11.922	7.0048E-06	2	177.14	4.71E-04	631	3.226E+06
63	Cyanogen	C ₂ N ₂	460-19-5	81.565	-4,808.9	-9.3748	1.3901E-05	2	245.25	7.39E+04	400.15	5.961E+06
64	Cyclobutane	C ₄ H ₈	287-23-0	85.899	-4,884.4	-10.883	1.4934E-02	1	182.48	1.80E+02	459.93	4.991E+06
65	Cyclohexane	C ₆ H ₁₂	110-82-7	51.087	-5,226.4	-4.2278	9.7554E-18	6	279.69	5.36E+03	553.8	4.094E+06
66	Cyclohexanol	C ₆ H ₁₂ O	108-93-0	189.19	-14,337	-24.148	1.0740E-05	2	296.6	7.65E+01	650.1	4.265E+06
67	Cyclohexanone	C ₆ H ₁₀ O	108-94-1	85.424	-7,944.4	-9.2862	4.9957E-06	2	242	6.80E+00	653	3.989E+06
68	Cyclohexene	C ₆ H ₁₀	110-83-8	88.184	-6,624.9	-10.059	8.2566E-06	2	169.67	1.04E-01	560.4	4.392E+06
69	Cyclopentane	C ₅ H ₁₀	287-92-3	66.341	-5,198.5	-6.8103	6.1930E-06	2	179.28	9.07E+00	511.7	4.513E+06
70	Cyclopentene	C ₅ H ₈	142-29-0	67.952	-5,187.5	-7.0785	6.8165E-06	2	138.13	1.28E-02	507	4.799E+06
71	Cyclopropane	C ₃ H ₆	75-19-4	40.608	-3,179.6	-2.8937	5.6131E-17	6	145.59	7.80E+01	398	5.494E+06
72	Cyclohexyl mercaptan	C ₆ H ₁₂ S	1569-69-3	85.146	-7,843.7	-9.2982	5.1788E-06	2	189.64	8.24E-03	664	3.970E+06
73	Decanal	C ₁₀ H ₂₀ O	112-31-2	201.64	-15,133	-26.264	1.4625E-05	2	267.15	4.86E-01	674.2	2.599E+06
74	Decane	C ₁₀ H ₂₂	124-18-5	112.73	-9,749.6	-13.245	7.1266E-06	2	243.51	1.39E+00	617.7	2.091E+06
75	Decanoic acid	C ₁₀ H ₂₀ O ₂	334-48-5	123.36	-14,680	-13.474	1.9491E-18	6	304.55	1.50E-01	722.1	2.233E+06
76	1-Decanol	C ₁₀ H ₂₂ O	112-30-1	156.239	-15,212	-18.424	8.5006E-18	6	280.05	1.51E-01	688	2.309E+06
77	1-Decene	C ₁₀ H ₂₀	872-05-9	68.401	-7,776.9	-6.4637	6.3750E-18	6	206.89	2.59E-02	616.6	2.223E+06
78	Decyl mercaptan	C ₁₀ H ₂₂ S	143-10-2	91.91	-10,565	-9.5957	5.7028E-18	6	247.56	2.59E-02	696	2.130E+06
79	1-Decyne	C ₁₀ H ₁₈	764-93-2	142.94	-11,119	-17.818	1.1020E-05	2	229.15	1.60E-01	619.85	2.363E+06
80	Deuterium	D ₂	7782-39-0	18.947	-154.47	-0.5723	3.8899E-02	1	18.73	1.72E+04	38.35	1.663E+06
81	1,1-Dibromoethane	C ₂ H ₄ Br ₂	557-91-5	62.711	-6,503.5	-5.7669	1.0427E-06	2	210.15	2.64E+00	628	6.034E+06
82	1,2-Dibromoethane	C ₂ H ₄ Br ₂	106-93-4	43.751	-5,587.7	-3.0891	8.2664E-07	2	282.85	7.53E+02	650.15	5.475E+06
83	Dibromomethane	CH ₂ Br ₂	74-95-3	86.295	-7,010.3	-9.5972	6.7794E-06	2	220.6	2.13E+01	611	7.170E+06
84	Dibutyl ether	C ₈ H ₁₈ O	142-96-1	72.227	-7,537.6	-7.0596	9.1442E-18	6	175.3	7.14E-04	584.1	2.459E+06
85	<i>m</i> -Dichlorobenzene	C ₆ H ₄ Cl ₂	541-73-1	53.187	-6,827.5	-4.3233	2.3112E-18	6	248.39	6.41E+00	683.95	4.070E+06
86	<i>o</i> -Dichlorobenzene	C ₆ H ₄ Cl ₂	95-50-1	77.105	-8,111.1	-7.8886	2.7267E-06	2	256.15	6.49E+00	705	4.074E+06
87	<i>p</i> -Dichlorobenzene	C ₆ H ₄ Cl ₂	106-46-7	88.31	-8,463.4	-9.6308	4.5833E-06	2	326.14	1.23E+03	684.75	4.070E+06
88	1,1-Dichloroethane	C ₂ H ₄ Cl ₂	75-34-3	66.611	-5,493.1	-6.7301	5.3579E-06	2	176.19	2.21E+00	523	5.106E+06
89	1,2-Dichloroethane	C ₂ H ₄ Cl ₂	107-06-2	92.355	-6,920.4	-10.651	9.1426E-06	2	237.49	2.37E+02	561.6	5.318E+06
90	Dichloromethane	CH ₂ Cl ₂	75-09-2	101.6	-6,541.6	-12.247	1.2311E-05	2	178.01	5.93E+00	510	6.093E+06
91	1,1-Dichloropropane	C ₃ H ₆ Cl ₂	78-99-9	83.495	-6,661.4	-9.2386	6.7652E-06	2	200	4.52E+00	560	4.239E+06
92	1,2-Dichloropropane	C ₃ H ₆ Cl ₂	78-87-5	65.955	-6,015.6	-6.5509	4.3172E-06	2	172.71	8.25E-02	572	4.232E+06
93	Diethanol amine	C ₄ H ₁₁ NO ₂	111-42-2	106.38	-13,714	-11.06	3.2645E-18	6	301.15	1.02E-01	736.6	4.260E+06
94	Diethyl amine	C ₄ H ₁₁ N	109-89-7	49.314	-4,949	-3.9256	9.1978E-18	6	223.35	3.74E+02	496.6	3.674E+06
95	Diethyl ether	C ₄ H ₁₀ O	60-29-7	136.9	-6,954.3	-19.254	2.4508E-02	1	156.85	3.95E-01	466.7	3.641E+06
96	Diethyl sulfide	C ₄ H ₁₀ S	352-93-2	46.705	-5,177.4	-3.5985	1.7147E-06	2	169.20	9.93E-02	557.15	3.961E+06
97	1,1-Difluoroethane	C ₂ H ₄ F ₂	75-37-6	73.491	-4,385.9	-8.1851	1.2978E-05	2	154.56	6.45E+01	386.44	4.507E+06
98	1,2-Difluoroethane	C ₂ H ₄ F ₂	624-72-6	84.625	-5,217.4	-9.871	1.3050E-05	2	215	2.83E+03	445	4.372E+06
99	Difluoromethane	CH ₂ F ₂	75-10-5	69.132	-3,847.7	-7.5868	1.5065E-05	2	136.95	5.43E+01	351.255	5.760E+06
100	Di-isopropyl amine	C ₆ H ₁₅ N	108-18-9	462.84	-18,227	-73.734	9.2794E-02	1	176.85	4.47E-03	523.1	3.199E+06
101	Di-isopropyl ether	C ₆ H ₁₄ O	108-20-3	41.631	-4,668.7	-2.8551	6.3693E-04	1	187.65	6.86E+00	500.05	2.869E+06
102	Di-isopropyl ketone	C ₇ H ₁₄ O	565-80-0	50.868	-6,036.5	-4.066	1.1326E-06	2	204.81	8.21E-01	576	3.017E+06
103	1,1-Dimethoxyethane	C ₃ H ₁₀ O ₂	534-15-6	53.637	-5,251.2	-4.5649	1.6754E-17	6	159.95	9.45E-02	507.8	3.773E+06
104	1,2-Dimethoxypropane	C ₃ H ₁₂ O ₂	7778-85-0	62.097	-6,174.9	-5.715	1.2323E-17	6	226.1	4.50E+01	543	3.447E+06
105	Dimethyl acetylene	C ₄ H ₆	503-17-3	66.592	-4,999.8	-6.8387	6.6793E-06	2	240.91	6.12E+03	473.2	4.870E+06
106	Dimethyl amine	C ₂ H ₇ N	124-40-3	71.738	-5,302	-7.3324	6.4200E-17	6	180.96	7.56E+01	437.2	5.258E+06
107	2,3-Dimethylbutane	C ₆ H ₁₄	79-29-8	77.161	-5,691.1	-8.501	8.0325E-06	2	145.19	1.52E-02	500	3.130E+06
108	1,1-Dimethylcyclohexane	C ₈ H ₁₆	590-66-9	81.184	-6,927	-8.8498	5.4580E-06	2	239.66	6.06E+01	591.15	2.939E+06
109	<i>cis</i> -1,2-Dimethylcyclohexane	C ₈ H ₁₆	2207-01-4	78.952	-7,075.4	-8.4344	4.5035E-06	2	223.16	6.41E+00	606.15	2.939E+06
110	<i>trans</i> -1,2-Dimethylcyclohexane	C ₈ H ₁₆	6876-23-9	78.429	-6,882.1	-8.4129	4.9831E-06	2	184.99	8.04E-02	596.15	2.938E+06
111	Dimethyl disulfide	C ₂ H ₆ S ₂	624-92-0	81.045	-6,941.3	-8.777	5.5501E-06	2	188.44	2.07E-01	615	5.363E+06
112	Dimethyl ether	C ₂ H ₆ O	115-10-6	44.704	-3,525.6	-3.4444	5.4574E-17	6	131.65	3.05E+00	400.1	5.274E+06
113	<i>N,N</i> -Dimethyl formamide	C ₃ H ₇ NO	68-12-2	82.762	-7,955.5	-8.8038	4.2431E-06	2	212.72	1.95E-01	649.6	4.365E+06
114	2,3-Dimethylpentane	C ₇ H ₁₆	565-59-3	78.335	-6,348.7	-8.5105	6.4311E-06	2	160	1.26E-02	537.3	2.882E+06
115	Dimethyl phthalate	C ₁₀ H ₁₀ O ₄	131-11-3	72.517	-10,415	-6.755	1.3269E-06	2	274.18	3.72E-02	766	2.780E+06
116	Dimethylsilane	C ₂ H ₆ Si	1111-74-6	63.08	-4,062.3	-6.425	1.5115E-16	6	122.93	4.15E-01	402	3.561E+06
117	Dimethyl sulfide	C ₂ H ₆ S	75-18-3	84.39	-5,740.6	-9.6454	1.0073E-05	2	174.88	7.86E+00	503.04	5.533E+06
118	Dimethyl sulfoxide	C ₂ H ₆ OS	67-68-5	56.273	-7,620.6	-4.6279	4.3819E-07	2	291.67	5.02E+01	729	5.648E+06
119	Dimethyl terephthalate	C ₁₀ H ₁₀ O ₄	120-61-6	43.541	-8,204.8	-2.7519	1.0466E-18	6	413.8	1.26E+03	772	2.778E+06
120	1,4-Dioxane	C ₄ H ₈ O ₂	123-91-1	44.494	-5,406.7	-3.1287	2.8913E-18	6	284.95	2.53E+03	587	5.158E+06

121	Diphenyl ether	C ₁₂ H ₁₀ O	101-84-8	59.969	-8,585.5	-5.1538	1.9983E-18	6	300.03	7.09E+00	766.8	3.097E+06
122	Dipropyl amine	C ₆ H ₁₅ N	142-84-7	54	-6,018.5	-4.4981	9.9684E-18	6	210.15	3.69E+00	550	3.111E+06
123	Dodecane	C ₁₂ H ₂₆	112-40-3	137.47	-11,976	-16.698	8.0906E-06	2	263.57	6.15E-01	658	1.822E+06
124	Eicosane	C ₂₀ H ₄₂	112-95-8	203.66	-19,441	-25.525	8.8382E-06	2	309.58	9.26E-03	768	1.175E+06
125	Ethane	C ₂ H ₆	74-84-0	51.857	-2,598.7	-5.1283	1.4913E-05	2	90.35	1.13E+00	305.32	4.852E+06
126	Ethanol	C ₂ H ₆ O	64-17-5	73.304	-7,122.3	-7.1424	2.8853E-06	2	159.05	4.96E-04	514	6.109E+06
127	Ethyl acetate	C ₄ H ₈ O ₂	141-78-6	66.824	-6,227.6	-6.41	1.7914E-17	6	189.6	1.43E+00	523.3	3.850E+06
128	Ethyl amine	C ₂ H ₇ N	75-04-7	81.56	-5,596.9	-9.0779	8.7920E-06	2	192.15	1.52E+02	456.15	5.594E+06
129	Ethylbenzene	C ₈ H ₁₀	100-41-4	89.063	-7,733.7	-9.917	5.9860E-06	2	178.2	3.91E-03	617.15	3.590E+06
130	Ethyl benzoate	C ₉ H ₁₀ O ₂	93-89-0	52.923	-7,531.7	-4.2347	1.1835E-06	2	238.45	1.69E-01	698	3.203E+06
131	2-Ethyl butanoic acid	C ₆ H ₁₂ O ₂	88-09-5	90.464	-10,243	-9.2836	5.2573E-18	6	258.15	4.63E-01	655	3.403E+06
132	Ethyl butyrate	C ₈ H ₁₂ O ₂	105-54-4	57.661	-6,346.5	-5.032	8.2534E-18	6	175.15	1.04E-02	571	2.935E+06
133	Ethylcyclohexane	C ₈ H ₁₆	1678-91-7	80.208	-7,203.2	-8.6023	4.5901E-06	2	161.84	3.57E-04	609.15	3.041E+06
134	Ethylcyclopentane	C ₇ H ₁₄	1640-89-7	88.671	-7,012.7	-10.045	7.4578E-06	2	134.71	3.71E-06	569.5	3.412E+06
135	Ethylene	C ₂ H ₄	74-85-1	53.963	-2,443	-5.5643	1.9079E-05	2	104	1.26E+02	282.34	5.032E+06
136	Ethylenediamine	C ₂ H ₆ N ₂	107-15-3	73.51	-7,572.7	-7.1435	1.2124E-17	6	284.29	6.78E+02	593	6.290E+06
137	Ethylene glycol	C ₂ H ₆ O ₂	107-21-1	84.09	-10,411	-8.1976	1.6536E-18	6	260.15	2.19E-01	720	8.257E+06
138	Ethyleneimine	C ₂ H ₅ N	151-56-4	66.51	-6,019.2	-6.3332	1.0394E-17	6	195.2	9.71E+00	537	6.850E+06
139	Ethylene oxide	C ₂ H ₄ O	75-21-8	91.944	-5,293.4	-11.682	1.4902E-02	1	160.65	7.79E+00	469.15	7.255E+06
140	Ethyl formate	C ₃ H ₆ O ₂	109-94-4	73.833	-5,817	-7.809	6.3200E-06	2	193.55	1.81E+01	508.4	4.708E+06
141	2-Ethyl hexanoic acid	C ₈ H ₁₆ O ₂	149-57-5	117.52	-12,991	-12.895	6.1306E-18	6	235	2.86E-04	674.6	2.788E+06
142	Ethylhexyl ether	C ₈ H ₁₈ O	5756-43-4	77.523	-7,978.8	-7.7757	1.0076E-17	6	180	7.60E-04	583	2.460E+06
143	Ethylisopropyl ether	C ₆ H ₁₂ O	625-54-7	57.723	-5,236.9	-5.2136	2.2998E-17	6	140	4.31E-03	489	3.415E+06
144	Ethylisopropyl ketone	C ₈ H ₁₂ O	565-69-5	57.459	-6,356.8	-4.9545	5.2015E-18	6	204.15	9.70E-01	567	3.293E+06
145	Ethyl mercaptan	C ₂ H ₆ S	75-08-1	65.551	-5,027.4	-6.6853	6.3208E-06	2	125.26	1.14E-03	499.15	5.492E+06
146	Ethyl propionate	C ₅ H ₁₀ O ₂	105-37-3	105.64	-8,007	-12.477	9.0000E-06	2	199.25	7.80E-01	546	3.337E+06
147	Ethylpropyl ether	C ₅ H ₁₂ O	628-32-0	86.898	-6,646.4	-9.5758	5.9615E-17	6	145.65	1.61E-03	500.23	3.372E+06
148	Ethyltrichlorosilane	C ₂ H ₅ Cl ₃ Si	115-21-9	62.614	-6,148.2	-5.84	1.0900E-17	6	167.55	1.85E-02	559.95	3.320E+06
149	Fluorine	F ₂	7782-41-4	42.393	-1,103.3	-4.1203	5.7815E-05	2	53.48	2.53E+02	144.12	5.167E+06
150	Fluorobenzene	C ₆ H ₅ F	462-06-6	51.915	-5,439	-4.2896	8.7527E-18	6	230.94	1.51E+02	560.09	4.544E+06
151	Fluoroethane	C ₂ H ₅ F	353-36-6	56.639	-3,576.5	-5.5801	9.8969E-06	2	129.95	8.37E+00	375.31	5.006E+06
152	Fluoromethane	CH ₃ F	593-53-3	59.123	-3,043.7	-6.1845	1.6637E-05	2	131.35	4.33E+02	317.42	5.875E+06
153	Formaldehyde	CH ₂ O	50-00-0	101.51	-4,917.2	-13.765	2.2031E-02	1	181.15	8.87E+02	408	6.594E+06
154	Formamide	CH ₃ NO	75-12-7	100.3	-10,763	-10.946	3.8503E-06	2	275.6	1.04E+00	771	7.751E+06
155	Formic acid	CH ₂ O ₂	64-18-6	50.323	-5,378.2	-4.203	3.4697E-06	2	281.45	2.40E+03	588	5.807E+06
156	Furan	C ₄ H ₄ O	110-00-9	74.738	-5,417	-8.0636	7.4700E-06	2	187.55	5.00E+01	490.15	5.550E+06
157	Helium-4	He	7440-59-7	11.533	-8.99	0.6724	2.7430E-01	1	1.76	1.46E+03	5.2	2.285E+05
158	Heptadecane	C ₁₇ H ₃₆	629-78-7	156.95	-15,557	-18.966	6.4559E-06	2	295.13	4.65E-02	736	1.344E+06
159	Heptanal	C ₇ H ₁₄ O	111-71-7	92.252	-8,349	-10.274	5.9252E-06	2	229.8	1.45E+00	616.8	3.155E+06
160	Heptane	C ₇ H ₁₆	142-82-5	87.829	-6,996.4	-9.8802	7.2099E-06	2	182.57	1.83E-01	540.2	2.719E+06
161	Heptanoic acid	C ₇ H ₁₄ O ₂	111-14-8	120.47	-13,106	-13.31	5.8384E-18	6	265.83	4.34E-02	677.3	3.039E+06
162	1-Heptanol	C ₇ H ₁₆ O	111-70-6	147.41	-13,466	-17.353	1.1284E-17	6	239.15	1.95E-02	632.3	3.013E+06
163	2-Heptanol	C ₇ H ₁₆ O	543-49-7	124.23	-11,637	-14.148	6.9486E-17	5.7	230	3.68E-02	608.3	2.995E+06
164	3-Heptanone	C ₇ H ₁₄ O	106-35-4	78.463	-8,077.2	-7.9062	8.0521E-18	6	234.15	2.30E+00	606.6	2.919E+06
165	2-Heptanone	C ₇ H ₁₄ O	110-43-0	75.494	-7,896.5	-7.5047	8.9130E-18	6	238.15	3.54E+00	611.4	2.946E+06
166	1-Heptene	C ₇ H ₁₄	592-76-7	65.922	-6,189	-6.3629	2.0091E-17	6	154.12	1.86E-03	537.4	2.921E+06
167	Heptyl mercaptan	C ₇ H ₁₆ S	1639-09-4	79.858	-8,501.8	-8.1043	8.1501E-18	6	229.92	3.05E-01	645	2.772E+06
168	1-Heptyne	C ₇ H ₁₂	628-71-7	59.083	-6,031.8	-5.3072	1.4357E-17	6	192.22	8.15E-01	547	3.209E+06
169	Hexadecane	C ₁₆ H ₃₄	544-76-3	156.06	-15,015	-18.941	6.8172E-06	2	291.31	9.23E-02	723	1.411E+06
170	Hexanal	C ₆ H ₁₂ O	66-25-1	81.507	-7,776.8	-8.4516	1.5143E-17	6	217.15	1.25E+00	591	3.461E+06
171	Hexane	C ₆ H ₁₄	110-54-3	104.65	-6,995.5	-12.702	1.2381E-05	2	177.83	9.02E-01	507.6	3.045E+06
172	Hexanoic acid	C ₆ H ₁₂ O ₂	142-62-1	114.05	-12,332	-12.45	5.6253E-18	6	269.25	2.43E-01	660.2	3.284E+06
173	1-Hexanol	C ₆ H ₁₄ O	111-27-3	135.421	-12,288	-15.732	1.2701E-17	6	228.55	2.25E-02	611.3	3.441E+06
174	2-Hexanol	C ₆ H ₁₄ O	626-93-7	109.42	-10,449	-12.051	2.6122E-46	16	223	7.44E-02	585.3	3.298E+06
175	2-Hexanone	C ₆ H ₁₂ O	591-78-6	107.44	-8,528.6	-12.679	8.4606E-06	2	217.35	1.45E+00	587.61	3.286E+06
176	3-Hexanone	C ₆ H ₁₂ O	589-38-8	73.155	-7,242.9	-7.2569	1.2741E-17	6	217.5	2.22E+00	582.82	3.322E+06
177	1-Hexene	C ₆ H ₁₂	592-41-6	51.024	-4,986.4	-4.2463	1.6768E-17	6	133.39	7.66E-04	504	3.212E+06
178	3-Hexyne	C ₆ H ₁₀	928-49-4	47.091	-5,104	-3.6371	5.1621E-04	1	170.05	2.20E-01	544	3.540E+06
179	Hexyl mercaptan	C ₆ H ₁₄ S	111-31-9	68.467	-7,390.5	-6.5456	7.7611E-18	6	192.62	1.31E-02	623	3.079E+06
180	1-Hexyne	C ₆ H ₁₀	693-02-7	133.2	-7,492.9	-18.405	2.2062E-02	1	141.25	3.92E-04	516.2	3.635E+06
181	2-Hexyne	C ₆ H ₁₀	764-35-2	123.71	-7,639	-16.451	1.6495E-02	1	183.65	5.40E-01	549	3.530E+06
182	Hydrazine	H ₂ N ₂	302-01-2	76.858	-7,245.2	-8.22	6.1557E-03	1	274.69	4.08E+02	653.15	1.473E+07
183	Hydrogen	H ₂	1333-74-0	12.69	-94.896	1.1125	3.2915E-04	2	13.95	7.21E+03	33.19	1.315E+06

TABLE 2-8 Vapor Pressure of Inorganic and Organic Liquids, $\ln P = C1 + C2/T + C3 \ln T + C4 T^{C5}$, P in Pa (Continued)

No.	Name	Formula	CAS no.	C1	C2	C3	C4	C5	T_{\min} , K	P at T_{\min}	T_{\max} , K	P at T_{\max}
184	Hydrogen bromide	HBr	10035-10-6	29.315	-2,424.5	-1.1354	2.3806E-18	6	185.15	2.95E+04	363.15	8.463E+06
185	Hydrogen chloride	HCl	7647-01-0	104.27	-3,731.2	-15.047	3.1340E-02	1	158.97	1.35E+04	324.65	8.356E+06
186	Hydrogen cyanide	HCN	74-90-8	36.75	-3,927.1	-2.1245	3.8948E-17	6	259.83	1.87E+04	456.65	5.353E+06
187	Hydrogen fluoride	HF	7664-39-3	59.544	-4,143.8	-6.1764	1.4161E-05	2	189.79	3.37E+02	461.15	6.487E+06
188	Hydrogen sulfide	H ₂ S	7783-06-4	85.584	-3,839.9	-11.199	1.8848E-02	1	187.68	2.29E+04	373.53	8.999E+06
189	Isobutyric acid	C ₄ H ₈ O ₂	79-31-2	110.38	-10,540	-12.262	1.4310E-17	6	227.15	7.82E-02	605	3.683E+06
190	Isopropyl amine	C ₃ H ₉ N	75-31-0	136.66	-7,201.5	-18.934	2.2255E-02	1	177.95	7.73E+00	471.85	4.540E+06
191	Malonic acid	C ₃ H ₄ O ₄	141-82-2	122.92	-16,258	-13.113	2.0609E-18	6	407.95	7.03E+01	805	5.652E+06
192	Methacrylic acid	C ₄ H ₆ O ₂	79-41-4	109.53	-10,410	-12.289	3.1990E-06	2	288.15	5.86E+01	662	4.812E+06
193	Methane	CH ₄	74-82-8	39.205	-1,324.4	-3.4366	3.1019E-05	2	90.69	1.17E+04	190.56	4.590E+06
194	Methanol	CH ₃ O	67-56-1	82.718	-6,904.5	-8.8622	7.4664E-06	2	175.47	1.11E-01	512.5	8.146E+06
195	N-Methyl acetamide	C ₃ H ₇ NO	79-16-3	79.128	-9,523.9	-7.7355	3.1616E-18	6	301.15	2.86E+01	718	4.997E+06
196	Methyl acetate	C ₃ H ₆ O ₂	79-20-9	61.267	-5,618.6	-5.6473	2.1080E-17	6	175.15	1.02E+00	506.55	4.695E+06
197	Methyl acetylene	C ₃ H ₄	74-99-7	50.242	-3,811.9	-4.2526	6.5326E-17	6	170.45	4.15E+02	402.4	5.619E+06
198	Methyl acrylate	C ₄ H ₆ O ₂	96-33-3	107.69	-7,027.2	-13.916	1.5185E-02	1	196.32	4.07E+00	536	4.277E+06
199	Methyl amine	CH ₃ N	74-89-5	75.206	-5,082.8	-8.0919	8.1130E-06	2	179.69	1.77E+02	430.05	7.414E+06
200	Methyl benzoate	C ₈ H ₈ O ₂	93-58-3	84.828	-9,334.7	-8.7063	6.1723E-18	6	260.75	1.81E+00	693	3.590E+06
201	3-Methyl-1,2-butadiene	C ₅ H ₈	598-25-4	66.575	-5,213.4	-6.7693	4.8106E-06	2	159.53	7.28E-01	490	3.831E+06
202	2-Methylbutane	C ₅ H ₁₂	78-78-4	71.308	-4,976	-7.7169	8.7271E-06	2	113.25	1.21E-04	460.4	3.366E+06
203	2-Methylbutanoic acid	C ₆ H ₁₀ O ₂	116-53-0	85.383	-9,575.4	-8.6164	5.6124E-18	6	193	6.94E-05	643	3.887E+06
204	3-Methyl-1-butanol	C ₅ H ₁₂ O	123-51-3	121.85	-10,976	-13.869	1.4283E-17	6	155.95	8.67E-09	577.2	3.916E+06
205	2-Methyl-1-butene	C ₅ H ₁₀	563-46-2	93.131	-5,525.4	-11.852	1.4205E-02	1	135.58	2.05E-02	465	3.465E+06
206	2-Methyl-2-butene	C ₅ H ₁₀	513-35-9	83.927	-5,640.5	-9.6453	1.1121E-05	2	139.39	1.94E-02	470	3.394E+06
207	2-Methyl-1-butene-3-yne	C ₅ H ₆	78-80-8	95.453	-5,448.8	-12.384	1.5643E-02	1	160.15	2.92E+00	492	4.469E+06
208	Methylbutyl ether	C ₅ H ₁₂ O	628-28-4	60.164	-5,621.7	-5.53	1.8629E-17	6	157.48	2.99E-02	512.74	3.377E+06
209	Methylbutyl sulfide	C ₅ H ₁₂ S	628-29-5	96.344	-7,856.3	-11.058	7.3080E-06	2	175.3	4.61E-03	593	3.464E+06
210	3-Methyl-1-butyne	C ₅ H ₈	598-23-2	69.459	-5,250	-7.1125	7.9289E-17	6	183.45	4.36E+01	462.3	4.199E+06
211	Methyl butyrate	C ₅ H ₁₀ O ₂	623-42-7	71.87	-6,885.7	-7.0944	1.4903E-17	6	187.35	1.34E-01	554.5	3.480E+06
212	Methylchlorosilane	CH ₃ ClSi	993-00-0	95.984	-5,401.7	-11.829	1.8092E-05	2	139.05	4.12E-01	442	4.170E+06
213	Methylcyclohexane	C ₇ H ₁₄	108-87-2	92.684	-7,080.8	-10.695	8.1366E-06	2	146.58	1.52E-04	572.1	3.486E+06
214	1-Methylcyclohexanol	C ₇ H ₁₄ O	590-67-0	134.63	-10,682	-16.511	8.4427E-06	2	299.15	2.57E+02	686	3.994E+06
215	cis-2-Methylcyclohexanol	C ₇ H ₁₄ O	7443-70-1	125.1	-10,288	-15.157	1.0918E-05	2	280.15	4.56E+01	614	3.808E+06
216	trans-2-Methylcyclohexanol	C ₇ H ₁₄ O	7443-52-9	54.179	-7,477.2	-4.22	3.5225E-18	6	269.15	1.62E+01	617	3.767E+06
217	Methylcyclopentane	C ₆ H ₁₂	96-37-7	55.368	-5,149.8	-5.0136	3.2220E-06	2	130.73	2.25E-04	532.7	3.759E+06
218	1-Methylcyclopentene	C ₆ H ₁₀	693-89-0	52.732	-5,286.9	-4.4509	1.0883E-17	6	146.62	3.98E-03	542	4.130E+06
219	3-Methylcyclopentene	C ₆ H ₁₀	1120-62-3	52.601	-5,120.3	-4.4554	1.3288E-17	6	115	2.12E-06	526	4.129E+06
220	Methyldichlorosilane	CH ₃ Cl ₂ Si	75-54-7	79.788	-5,420	-9.0702	1.1489E-05	2	182.55	2.58E+01	483	3.964E+06
221	Methylethyl ether	C ₃ H ₈ O	540-67-0	78.586	-5,176.3	-8.7501	9.1727E-06	2	160	7.85E+00	437.8	4.433E+06
222	Methylethyl ketone	C ₄ H ₈ O	78-93-3	72.698	-6,143.6	-7.5779	5.6476E-06	2	186.48	1.39E+00	535.5	4.120E+06
223	Methylethyl sulfide	C ₃ H ₈ S	624-89-5	79.07	-6,114.1	-8.631	6.5333E-06	2	167.23	2.25E-01	533	4.261E+06
224	Methyl formate	C ₂ H ₄ O ₂	107-31-3	77.184	-5,606.1	-8.392	7.8468E-06	2	174.15	6.88E+00	487.2	5.983E+06
225	Methylisobutyl ether	C ₆ H ₁₂ O	625-44-5	57.984	-5,339.6	-5.2362	2.0767E-17	6	150	2.13E-02	497	3.416E+06
226	Methylisobutyl ketone	C ₆ H ₁₂ O	108-10-1	80.503	-7,421.8	-8.379	1.8114E-17	6	189.15	6.99E-02	574.6	3.272E+06
227	Methyl Isocyanate	C ₂ H ₃ NO	624-83-9	57.612	-5,197.9	-5.1269	2.1702E-17	6	256.15	7.28E+03	488	5.480E+06
228	Methylisopropyl ether	C ₄ H ₁₀ O	598-53-8	53.867	-4,701	-4.7052	2.8791E-17	6	127.93	3.32E-03	464.48	3.764E+06
229	Methylisopropyl ketone	C ₅ H ₁₀ O	563-80-4	45.242	-5,324.4	-3.2551	3.0363E-18	6	180.15	2.95E-01	553.4	3.792E+06
230	Methylisopropyl sulfide	C ₄ H ₁₀ S	1551-21-9	52.82	-5,437.7	-4.442	9.5103E-18	6	171.64	1.80E-01	553.1	4.022E+06
231	Methyl mercaptan	CH ₃ S	74-93-1	54.15	-4,337.7	-4.8127	4.5000E-17	6	150.18	3.15E+00	469.95	7.231E+06
232	Methyl methacrylate	C ₅ H ₈ O ₂	80-62-6	107.36	-8,085.3	-12.72	8.3307E-06	2	224.95	1.91E+01	566	3.674E+06
233	2-Methyloctanoic acid	C ₉ H ₁₈ O ₂	3004-93-1	105.7	-12,458	-11.234	4.4629E-18	6	240	4.19E-04	694	2.545E+06
234	2-Methylpentane	C ₆ H ₁₄	107-83-5	53.579	-5,041.2	-4.6404	1.9443E-17	6	119.55	2.07E-05	497.7	3.044E+06
235	Methyl pentyl ether	C ₆ H ₁₄ O	628-80-8	61.907	-6,188.9	-5.706	1.1767E-17	6	176	6.33E-02	546.49	3.041E+06
236	2-Methylpropane	C ₄ H ₁₀	75-28-5	108.43	-5,039.9	-15.012	2.2725E-02	1	113.54	1.21E-02	407.8	3.630E+06
237	2-Methyl-2-propanol	C ₄ H ₁₀ O	75-65-0	172.27	-11,589	-22.113	1.3703E-05	2	298.97	5.88E+03	506.2	3.957E+06
238	2-Methyl propene	C ₄ H ₈	115-11-7	78.01	-4,634.1	-8.9575	1.3413E-05	2	132.81	6.45E-01	417.9	4.004E+06
239	Methyl propionate	C ₄ H ₈ O ₂	554-12-1	70.717	-6,439.7	-6.9845	2.0129E-17	6	185.65	6.34E-01	530.6	4.028E+06
240	Methylpropyl ether	C ₄ H ₁₀ O	557-17-5	67.942	-5,419.1	-6.8067	4.7778E-17	6	133.97	2.90E-03	476.25	3.802E+06
241	Methylpropyl sulfide	C ₄ H ₁₀ S	3877-15-4	83.711	-6,786.9	-9.2526	6.6666E-06	2	160.17	4.26E-03	565	3.972E+06
242	Methylsilane	CH ₃ Si	992-94-9	37.205	-2,590.3	-2.5993	6.0508E-06	2	116.34	1.43E+01	352.5	4.702E+06

243	α -Methyl styrene	C ₉ H ₁₀	98-83-9	56.485	-6.954.2	-4.7889	2.7753E-18	6	249.95	9.23E+00	654	3.341E+06
244	Methyl <i>tert</i> -butyl ether	C ₈ H ₁₈ O	1634-04-4	57.1511	-5.201.7	-5.1429	1.6529E-17	6	164.55	4.93E-01	497.1	3.285E+06
245	Methyl vinyl ether	C ₃ H ₆ O	107-25-5	51.085	-4.271	-4.307	3.0530E-17	6	151.15	3.37E+00	437	4.583E+06
246	Naphthalene	C ₁₀ H ₈	91-20-3	62.964	-8.137.5	-5.6317	2.2675E-18	6	353.43	9.91E+02	748.4	4.069E+06
247	Neon	Ne	7440-01-9	29.755	-271.06	-2.6081	5.2700E-04	2	24.56	4.38E+04	44.4	2.665E+06
248	Nitroethane	C ₂ H ₅ NO ₂	79-24-3	75.632	-7.202.3	-7.6464	1.8250E-17	6	183.63	3.18E-02	593	5.159E+06
249	Nitrogen	N ₂	7727-37-9	58.282	-1.084.1	-8.3144	4.4127E-02	1	63.15	1.25E+04	126.2	3.391E+06
250	Nitrogen trifluoride	F ₃ N	7783-54-2	68.149	-2.257.9	-8.9118	2.3233E-02	1	66.46	1.86E-01	234	4.500E+06
251	Nitromethane	CH ₃ NO ₂	75-52-5	57.278	-6.089	-4.9821	1.2154E-17	6	244.6	1.47E+02	588.15	6.309E+06
252	Nitrous oxide	N ₂ O	10024-97-2	96.512	-4.045	-12.277	2.8560E-05	2	182.3	8.69E+04	309.57	7.278E+06
253	Nitric oxide	NO	10102-43-9	72.974	-2.650	-8.261	9.7000E-15	6	109.5	2.20E+04	180.15	6.516E+06
254	Nonadecane	C ₁₉ H ₄₀	629-92-5	182.54	-17.897	-22.498	7.4008E-06	2	305.04	1.59E-02	758	1.208E+06
255	Nonanal	C ₉ H ₁₈ O	124-19-6	337.71	-18.506	-50.224	4.7345E-02	1	255.15	3.42E-01	658	2.743E+06
256	Nonane	C ₉ H ₂₀	111-84-2	109.35	-9.030.4	-12.882	7.8544E-06	2	219.66	4.31E-01	594.6	2.305E+06
257	Nonanoic acid	C ₉ H ₁₈ O ₂	112-05-0	137.6	-14.948	-15.618	5.5660E-18	6	285.55	4.71E-02	710.7	2.502E+06
258	1-Nonanol	C ₉ H ₂₀ O	143-08-8	162.854	-15.205	-19.424	1.0722E-17	6	268.15	8.55E-02	670.9	2.522E+06
259	2-Nonanol	C ₉ H ₂₀ O	628-99-9	146.46	-13.813	-17.158	8.6279E-40	14	238.15	4.32E-03	649.5	2.551E+06
260	1-Nonene	C ₉ H ₁₈	124-11-8	63.313	-7.040.4	-5.8055	7.5753E-18	6	191.91	2.04E-02	593.1	2.427E+06
261	Nonyl mercaptan	C ₉ H ₂₀ S	1455-21-6	106.2	-10.982	-11.696	8.8955E-18	6	253.05	1.47E-01	681	2.330E+06
262	1-Nonyne	C ₉ H ₁₆	3452-09-3	114.77	-9.430.8	-13.631	8.1918E-06	2	223.15	4.50E-01	598.05	2.620E+06
263	Octadecane	C ₁₈ H ₃₈	593-45-3	157.68	-16.093	-18.954	5.9272E-06	2	301.31	3.39E-02	747	1.256E+06
264	Octanal	C ₈ H ₁₆ O	124-13-0	83.601	-8.865.8	-8.5711	7.9446E-18	6	246	1.46E+00	638.9	2.951E+06
265	Octane	C ₈ H ₁₈	111-65-9	96.084	-7.900.2	-11.003	7.1802E-06	2	216.38	2.11E+00	568.7	2.467E+06
266	Octanoic acid	C ₈ H ₁₆ O ₂	124-07-2	140.16	-14.813	-16.004	6.4239E-18	6	289.65	1.83E-01	694.26	2.761E+06
267	1-Octanol	C ₈ H ₁₈ O	111-87-5	144.111	-13.667	-16.826	9.3666E-18	6	257.65	9.60E-02	652.3	2.782E+06
268	2-Octanol	C ₈ H ₁₈ O	123-96-6	133.41	-12.630	-15.369	2.9939E-41	14	241.55	4.04E-02	629.8	2.754E+06
269	2-Octanone	C ₈ H ₁₆ O	111-13-7	63.775	-7.711.3	-5.7359	3.0902E-18	6	252.85	4.68E+00	632.7	2.647E+06
270	3-Octanone	C ₈ H ₁₆ O	106-68-3	72.382	-8.054.8	-7.0002	5.8276E-18	6	255.55	7.84E+00	627.7	2.705E+06
271	1-Octene	C ₈ H ₁₆	111-66-0	74.936	-7.155.9	-7.5843	1.7106E-17	6	171.45	2.98E-03	566.9	2.663E+06
272	Octyl mercaptan	C ₈ H ₁₈ S	111-88-6	78.368	-8.855.4	-7.8202	5.6629E-18	6	223.95	3.05E-02	667.3	2.523E+06
273	1-Octyne	C ₈ H ₁₄	629-05-0	64.612	-6.802.5	-6.0261	1.1013E-17	6	193.55	1.04E-01	574	2.880E+06
274	Oxalic acid	C ₂ H ₂ O ₄	144-62-7	122.04	-16.050	-12.986	2.0871E-18	6	462.65	2.15E+03	804	7.060E+06
275	Oxygen	O ₂	7782-44-7	51.245	-1.200.2	-6.4361	2.8405E-02	1	54.36	1.48E+02	154.58	5.021E+06
276	Ozone	O ₃	10028-15-6	40.067	-2.204.8	-2.9351	7.7520E-16	6	80.15	7.35E-01	261	5.566E+06
277	Pentadecane	C ₁₅ H ₃₂	629-62-9	135.57	-13.478	-16.022	5.6136E-06	2	283.07	1.29E-01	708	1.474E+06
278	Pentanal	C ₅ H ₁₀ O	110-62-3	149.58	-8.890	-20.697	2.2101E-02	1	182	5.23E-02	566.1	3.969E+06
279	Pentane	C ₅ H ₁₂	109-66-0	78.741	-5.420.3	-8.8253	9.6171E-06	2	143.42	6.86E-02	469.7	3.364E+06
280	Pentanoic acid	C ₅ H ₁₀ O ₂	109-52-4	101.7	-10.955	-10.829	7.1880E-18	6	239.15	3.28E-02	639.16	3.589E+06
281	1-Pentanol	C ₅ H ₁₂ O	71-41-0	114.748	-10.643	-12.858	1.2491E-17	6	195.56	5.48E-04	588.1	3.896E+06
282	2-Pentanol	C ₅ H ₁₂ O	6032-29-7	122.26	-10.774	-13.943	1.0700E-42	15	200	4.15E-03	561	3.709E+06
283	2-Pentanone	C ₅ H ₁₀ O	107-87-9	84.635	-7.078.4	-9.3	6.2702E-06	2	196.29	7.52E-01	561.08	3.706E+06
284	3-Pentanone	C ₅ H ₁₀ O	96-22-0	44.286	-5.415.1	-3.0913	1.8580E-18	6	234.18	7.34E+01	560.95	3.699E+06
285	1-Pentene	C ₅ H ₁₀	109-67-1	46.994	-4.289.5	-3.7345	2.5424E-17	6	108.02	3.70E-05	464.8	3.562E+06
286	2-Pentyl mercaptan	C ₅ H ₁₂ S	2084-19-7	58.985	-6.193.1	-5.2746	7.3986E-18	6	160.75	1.77E-03	584.3	3.537E+06
287	Pentyl mercaptan	C ₅ H ₁₂ S	110-66-7	67.309	-6.880.8	-6.4449	1.0148E-17	6	197.45	2.01E-01	598	3.474E+06
288	1-Pentyne	C ₅ H ₈	627-19-0	82.805	-5.683.8	-9.4301	1.0767E-05	2	167.45	2.40E+00	481.2	4.170E+06
289	2-Pentyne	C ₅ H ₈	627-21-4	137.29	-7.447.1	-19.01	2.1415E-02	1	163.83	2.05E-01	519	4.020E+06
290	Phenanthrene	C ₁₄ H ₁₀	85-01-8	72.958	-10.943	-6.7902	1.0850E-18	6	372.38	2.93E+01	869	2.902E+06
291	Phenol	C ₆ H ₆ O	108-95-2	95.444	-10.113	-10.09	6.7603E-18	6	314.06	1.88E+02	694.25	6.059E+06
292	Phenyl isocyanate	C ₇ H ₅ NO	103-71-9	86.779	-8.101.8	-9.5303	6.1367E-06	2	243.15	4.33E+00	653	4.063E+06
293	Phthalic anhydride	C ₈ H ₄ O ₃	85-44-9	126.5	-12.551	-15.002	7.7521E-06	2	404.15	7.90E+02	791	4.734E+06
294	Propadiene	C ₃ H ₄	463-49-0	57.069	-3.682.7	-5.5662	6.5133E-06	2	136.87	1.83E+01	394	5.218E+06
295	Propane	C ₃ H ₈	74-98-6	59.078	-3.492.6	-6.0669	1.0919E-05	2	85.47	1.68E-04	369.83	4.214E+06
296	1-Propanol	C ₃ H ₈ O	71-23-8	84.6642	-8.307.2	-8.5767	7.5091E-18	6	146.95	4.28E-07	536.8	5.170E+06
297	2-Propanol	C ₃ H ₈ O	67-63-0	96.094	-8.575.4	-10.292	1.6665E-17	6	185.26	1.95E-02	508.3	4.783E+06
298	Propenylcyclohexene	C ₉ H ₁₄	13511-13-2	64.268	-7.298.9	-5.9109	4.8482E-18	6	199	2.48E-02	636	3.130E+06
299	Propionaldehyde	C ₃ H ₆ O	123-38-6	80.581	-5.896.1	-8.9301	8.2236E-06	2	170	1.31E+00	504.4	4.919E+06
300	Propionic acid	C ₃ H ₆ O ₂	79-09-4	54.552	-7.149.4	-4.2769	1.1843E-18	6	252.45	1.31E+01	600.81	4.608E+06
301	Propionitrile	C ₃ H ₅ N	107-12-0	82.699	-6.703.5	-9.1506	7.5424E-06	2	180.26	1.69E-01	564.4	4.191E+06
302	Propyl acetate	C ₅ H ₁₀ O ₂	109-60-4	115.16	-8.433.9	-13.934	1.0346E-05	2	178.15	1.71E-02	549.73	3.366E+06
303	Propyl amine	C ₃ H ₉ N	107-10-8	58.398	-5.312.7	-5.2876	1.9913E-06	2	188.36	1.30E+01	496.95	4.738E+06
304	Propylbenzene	C ₉ H ₁₂	103-65-1	91.379	-8.276.8	-10.176	5.6240E-06	2	173.55	1.81E-04	638.35	3.202E+06
305	Propylene	C ₃ H ₆	115-07-1	43.905	-3.097.8	-3.4425	9.9989E-17	6	87.89	1.17E-03	364.85	4.599E+06

TABLE 2-8 Vapor Pressure of Inorganic and Organic Liquids, $\ln P = C1 + C2/T + C3 \ln T + C4 T^{C5}$, P in Pa (Concluded)

No.	Name	Formula	CAS no.	C1	C2	C3	C4	C5	T_{\min} , K	P at T_{\min}	T_{\max} , K	P at T_{\max}
306	Propyl formate	C ₄ H ₈ O ₂	110-74-7	104.08	-7,535.9	-12.348	9.6020E-06	2	180.25	2.11E-01	538	4.031E+06
307	2-Propyl mercaptan	C ₃ H ₆ S	75-33-2	60.43	-5,276.9	-5.6572	2.6039E-17	6	142.61	9.73E-03	517	4.752E+06
308	Propyl mercaptan	C ₃ H ₆ S	107-03-9	62.165	-5,624	-5.8595	2.0597E-17	6	159.95	6.51E-02	536.6	4.627E+06
309	1,2-Propylene glycol	C ₃ H ₈ O ₂	57-55-6	212.8	-15,420	-28.109	2.1564E-05	2	213.15	9.29E-05	626	6.041E+06
310	Quinone	C ₆ H ₄ O ₂	106-51-4	48.651	-7,289.5	-3.4453	1.0068E-18	6	388.85	1.17E+04	683	5.925E+06
311	Silicon tetrafluoride	F ₄ Si	7783-61-1	272.85	-9,548.9	-40.089	6.3699E-15	6	186.35	2.21E+05	259	3.748E+06
312	Styrene	C ₈ H ₈	100-42-5	105.93	-8,685.9	-12.42	7.5583E-06	2	242.54	1.06E+01	636	3.823E+06
313	Succinic acid	C ₄ H ₆ O ₄	110-15-6	128.65	-16,958	-13.872	2.1559E-18	6	460.65	8.85E+02	806	4.727E+06
314	Sulfur dioxide	O ₂ S	7446-09-5	47.365	-4,084.5	-3.6469	1.7990E-17	6	197.67	1.67E+03	430.75	7.860E+06
315	Sulfur hexafluoride	F ₆ S	2551-62-4	29.16	-2,383.6	-1.1342			223.15	2.30E+05	318.69	3.771E+06
316	Sulfur trioxide	O ₃ S	7446-11-9	180.99	-12,060	-22.839	7.2350E-17	6	289.95	2.09E+04	490.85	8.192E+06
317	Terephthalic acid	C ₈ H ₆ O ₄	100-21-0	248.72	-32,238	-30.009	4.7950E-06	2	700.15	4.57E+03	1113	3.943E+06
318	<i>o</i> -Terphenyl	C ₁₈ H ₁₄	84-15-1	110.52	-14,045	-11.861	2.2121E-18	6	329.35	4.14E-01	857	2.974E+06
319	Tetradecane	C ₁₄ H ₃₀	629-59-4	140.47	-13,231	-16.859	6.5877E-06	2	279.01	2.53E-01	693	1.569E+06
320	Tetrahydrofuran	C ₄ H ₈ O	109-99-9	54.898	-5,305.4	-4.7627	1.4291E-17	6	164.65	1.96E-01	540.15	5.203E+06
321	1,2,3,4-Tetrahydronaphthalene	C ₁₀ H ₁₂	119-64-2	137.23	-10,620	-17.908	1.4506E-02	1	237.38	1.33E-01	720	3.624E+06
322	Tetrahydrothiophene	C ₄ H ₆ S	110-01-0	75.881	-6,910.6	-7.9499	4.4315E-06	2	176.99	1.54E-02	631.95	5.117E+06
323	2,2,3,3-Tetramethylbutane	C ₈ H ₁₈	594-82-1	57.963	-5,901.5	-5.2048	9.1301E-18	6	373.96	8.69E+04	568	2.871E+06
324	Thiophene	C ₄ H ₄ S	110-02-1	93.193	-7,001.5	-10.738	8.2308E-06	2	234.94	1.86E+02	579.35	5.702E+06
325	Toluene	C ₇ H ₈	108-88-3	76.945	-6,729.8	-8.179	5.3017E-06	2	178.18	4.75E-02	591.75	4.080E+06
326	1,1,2-Trichloroethane	C ₂ H ₃ Cl ₃	79-00-5	54.153	-6,041.8	-4.5383	4.9833E-18	6	236.5	4.47E+01	602	4.447E+06
327	Tridecane	C ₁₃ H ₂₈	629-50-5	137.45	-12,549	-16.543	7.1275E-06	2	267.76	2.51E-01	675	1.679E+06
328	Triethyl amine	C ₆ H ₁₅ N	121-44-8	56.55	-5,681.9	-4.9815	1.2363E-17	6	158.45	1.06E-02	535.15	3.037E+06
329	Trimethyl amine	C ₃ H ₉ N	75-50-3	134.68	-6,055.8	-19.415	2.8619E-02	1	156.08	9.92E+00	433.25	4.102E+06
330	1,2,3-Trimethylbenzene	C ₉ H ₁₂	526-73-8	78.341	-8,019.8	-8.1458	3.8971E-06	2	247.79	3.71E+00	664.5	3.447E+06
331	1,2,4-Trimethylbenzene	C ₉ H ₁₂	95-63-6	85.301	-8,215.9	-9.2166	4.7979E-06	2	229.33	6.93E-01	649.1	3.212E+06
332	2,2,4-Trimethylpentane	C ₈ H ₁₈	540-84-1	84.912	-6,722.2	-9.5157	7.2244E-06	2	165.78	1.71E-02	543.8	2.550E+06
333	2,3,3-Trimethylpentane	C ₈ H ₁₈	560-21-4	83.105	-6,903.7	-9.1858	6.4703E-06	2	172.22	1.68E-02	573.5	2.812E+06
334	1,3,5-Trinitrobenzene	C ₆ H ₃ N ₃ O ₆	99-35-4	506.33	-37,483	-69.22	2.7381E-05	2	398.4	8.50E+00	846	3.410E+06
335	2,4,6-Trinitrotoluene	C ₇ H ₅ N ₃ O ₆	118-96-7	302	-24,324	-40.13	1.7403E-05	2	354	9.36E-01	828	3.019E+06
336	Undecane	C ₁₁ H ₂₄	1120-21-4	131	-11,143	-15.855	8.1871E-06	2	247.57	4.08E-01	639	1.949E+06
337	1-Undecanol	C ₁₁ H ₂₄ O	112-42-5	182.571	-17,112	-22.125	1.12835E-17	6	288.45	1.26E-01	703.9	2.120E+06
338	Vinyl acetate	C ₄ H ₆ O ₂	108-05-4	57.406	-5,702.8	-5.0307	1.1042E-17	6	180.35	7.06E-01	519.13	3.930E+06
339	Vinyl acetylene	C ₄ H ₄	689-97-4	55.682	-4,439.3	-5.0136	1.9650E-17	6	173.15	6.69E+01	454	4.887E+06
340	Vinyl chloride	C ₂ H ₃ Cl	75-01-4	91.432	-5,141.7	-10.981	1.4318E-05	2	119.36	1.92E-02	432	5.750E+06
341	Vinyl trichlorosilane	C ₂ H ₃ Cl ₃ Si	75-94-5	54.571	-5,561.5	-4.712	1.0702E-17	6	178.35	3.54E-01	543.15	3.058E+06
342	Water	H ₂ O	7732-18-5	73.649	-7,258.2	-7.3037	4.1653E-06	2	273.16	6.11E+02	647.096	2.193E+07
343	<i>m</i> -Xylene	C ₈ H ₁₀	108-38-3	85.099	-7,615.9	-9.3072	5.5643E-06	2	225.3	3.18E+00	617	3.528E+06
344	<i>o</i> -Xylene	C ₈ H ₁₀	95-47-6	90.405	-7,955.2	-10.086	5.9594E-06	2	247.98	2.18E+01	630.3	3.741E+06
345	<i>p</i> -Xylene	C ₈ H ₁₀	106-42-3	88.72	-7,741.2	-9.8693	6.0770E-06	2	286.41	5.76E+02	616.2	3.501E+06

Vapor pressure P_v is calculated by

$$P_v = \exp(C1 + C2/T + C3 \ln T + C4 T^{C5})$$

where P_v is in Pa and T is in K. All substances are listed by chemical family in Table 2-6 and by formula in Table 2-7.

Values in this table were taken from the Design Institute for Physical Properties (DIPPR) of the American Institute of Chemical Engineers (AIChE), copyright 2007 AIChE and reproduced with permission of AIChE and of the DIPPR Evaluated Process Design Data Project Steering Committee. Their source should be cited as R. L. Rowley, W. V. Wilding, J. L. Oscarson, Y. Yang, N. A. Zundel, T. E. Daubert, R. P. Danner, DIPPR® Data Compilation of Pure Chemical Properties, Design Institute for Physical Properties, AIChE, New York (2007).

The number of digits provided for values at T_{\min} and T_{\max} was chosen for uniformity of appearance and formatting; these do not represent the uncertainties of the physical quantities, but are the result of calculations from the standard thermophysical property formulations within a fixed format.