

VAPOR PRESSURES OF PURE SUBSTANCES

UNITS CONVERSIONS

For this subsection, the following units conversions are applicable:

°F = % °C + 32.

To convert millimeters of mercury to pounds-force per square inch, multiply by 0.01934.

TABLE 2-3 Vapor Pressure of Water Ice from –15 to 0°C*
mmHg

t, °C	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
–14	1.361	1.348	1.336	1.324	1.312	1.300	1.288	1.276	1.264	1.253
–13	1.490	1.477	1.464	1.450	1.437	1.424	1.411	1.399	1.386	1.373
–12	1.632	1.617	1.602	1.588	1.574	1.559	1.546	1.532	1.518	1.504
–11	1.785	1.769	1.753	1.737	1.722	1.707	1.691	1.676	1.661	1.646
–10	1.950	1.934	1.916	1.899	1.883	1.866	1.849	1.833	1.817	1.800
–9	2.131	2.112	2.093	2.075	2.057	2.039	2.021	2.003	1.985	1.968
–8	2.326	2.306	2.285	2.266	2.246	2.226	2.207	2.187	2.168	2.149
–7	2.537	2.515	2.493	2.472	2.450	2.429	2.408	2.387	2.367	2.346
–6	2.765	2.742	2.718	2.695	2.672	2.649	2.626	2.603	2.581	2.559
–5	3.013	2.987	2.962	2.937	2.912	2.887	2.862	2.838	2.813	2.790
–4	3.280	3.252	3.225	3.198	3.171	3.144	3.117	3.091	3.065	3.039
–3	3.568	3.539	3.509	3.480	3.451	3.422	3.393	3.364	3.336	3.308
–2	3.880	3.848	3.816	3.785	3.753	3.722	3.691	3.660	3.630	3.599
–1	4.217	4.182	4.147	4.113	4.079	4.045	4.012	3.979	3.946	3.913
–0	4.579	4.542	4.504	4.467	4.431	4.395	4.359	4.323	4.287	4.252

*For data at 0(0.2)–30(2)–98°C see p. 2324, *Handbook of Chemistry and Physics*, 40th ed., Chemical Rubber Publishing Co.

ADDITIONAL REFERENCES

Additional compilations of vapor-pressure data include Boublik, Fried, and Hala, *The Vapor Pressures of Pure Substances*, Elsevier, Amsterdam, 1984. See also Hirata, Ohe, and Nagahama, *Computer Aided Data Book of Vapor-Liquid Equilibria*, Kodansha/Elsevier, Tokyo, 1975; Weishaupt, *Landolt-Börnstein New Series Group IV*, vol. 3; *Thermodynamic Equilibria of Boiling Mixtures*, Springer-Verlag, Berlin, 1975; Wichterle, Linek, and Hala, *Vapor-Liquid Equilibrium Data Bibliography*, Elsevier, Amsterdam, 1973; suppl. 1, 1976; suppl. 2, 1982.

TABLE 2-4 Vapor Pressure of Liquid Water from –16 to 0°C*
mmHg

t, °C	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
–15	1.436	1.425	1.414	1.402	1.390	1.379	1.368	1.356	1.345	1.334
–14	1.560	1.547	1.534	1.522	1.511	1.497	1.485	1.472	1.460	1.449
–13	1.691	1.678	1.665	1.651	1.637	1.624	1.611	1.599	1.585	1.572
–12	1.834	1.819	1.804	1.790	1.776	1.761	1.748	1.734	1.720	1.705
–11	1.987	1.971	1.955	1.939	1.924	1.909	1.893	1.878	1.863	1.848
–10	2.149	2.134	2.116	2.099	2.084	2.067	2.050	2.034	2.018	2.001
–9	2.326	2.307	2.289	2.271	2.254	2.236	2.219	2.201	2.184	2.167
–8	2.514	2.495	2.475	2.456	2.437	2.418	2.399	2.380	2.362	2.343
–7	2.715	2.695	2.674	2.654	2.633	2.613	2.593	2.572	2.553	2.533
–6	2.931	2.909	2.887	2.866	2.843	2.822	2.800	2.778	2.757	2.736
–5	3.163	3.139	3.115	3.092	3.069	3.046	3.022	3.000	2.976	2.955
–4	3.410	3.384	3.359	3.334	3.309	3.284	3.259	3.235	3.211	3.187
–3	3.673	3.647	3.620	3.593	3.567	3.540	3.514	3.487	3.461	3.436
–2	3.956	3.927	3.898	3.871	3.841	3.813	3.785	3.757	3.730	3.702
–1	4.258	4.227	4.196	4.165	4.135	4.105	4.075	4.045	4.016	3.986
–0	4.579	4.546	4.513	4.480	4.448	4.416	4.385	4.353	4.320	4.289

*Computed from the above table with the aid of the thermodynamic equation

log₁₀ $\frac{p_w}{p_i}$ = $\frac{-1.1489t}{273.1 + t}$ – 1.330 × 10^{–5}t² + 9.084 × 10^{–8}t³

TABLE 2-5 Vapor Pressure of Liquid Water from 0 to 100°C
mmHg

t, °C	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0	4.579	4.613	4.647	4.681	4.715	4.750	4.785	4.820	4.855	4.890
1	4.926	4.962	4.998	5.034	5.070	5.107	5.144	5.181	5.219	5.256
2	5.294	5.332	5.370	5.408	5.447	5.486	5.525	5.565	5.605	5.645
3	5.685	5.725	5.766	5.807	5.848	5.889	5.931	5.973	6.015	6.058
4	6.101	6.144	6.187	6.230	6.274	6.318	6.363	6.408	6.453	6.498
5	6.543	6.589	6.635	6.681	6.728	6.775	6.822	6.869	6.917	6.965
6	7.013	7.062	7.111	7.160	7.209	7.259	7.309	7.360	7.411	7.462
7	7.513	7.565	7.617	7.669	7.722	7.775	7.828	7.882	7.936	7.990
8	8.045	8.100	8.155	8.211	8.267	8.323	8.380	8.437	8.494	8.551
9	8.609	8.668	8.727	8.786	8.845	8.905	8.965	9.025	9.086	9.147
10	9.209	9.271	9.333	9.395	9.458	9.521	9.585	9.649	9.714	9.779
11	9.844	9.910	9.976	10.042	10.109	10.176	10.244	10.312	10.380	10.449
12	10.518	10.588	10.658	10.728	10.799	10.870	10.941	11.013	11.085	11.158
13	11.231	11.305	11.379	11.453	11.528	11.604	11.680	11.756	11.833	11.910
14	11.987	12.065	12.144	12.223	12.302	12.382	12.462	12.543	12.624	12.706
15	12.788	12.870	12.953	13.037	13.121	13.205	13.290	13.375	13.461	13.547
16	13.634	13.721	13.809	13.898	13.987	14.076	14.166	14.256	14.347	14.438
17	14.530	14.622	14.715	14.809	14.903	14.997	15.092	15.188	15.284	15.380
18	15.477	15.575	15.673	15.772	15.871	15.971	16.071	16.171	16.272	16.374
19	16.477	16.581	16.685	16.789	16.894	16.999	17.105	17.212	17.319	17.427
20	17.535	17.644	17.753	17.863	17.974	18.085	18.197	18.309	18.422	18.536
21	18.650	18.765	18.880	18.996	19.113	19.231	19.349	19.468	19.587	19.707
22	19.827	19.948	20.070	20.193	20.316	20.440	20.565	20.690	20.815	20.941
23	21.068	21.196	21.324	21.453	21.583	21.714	21.845	21.977	22.110	22.243
24	22.377	22.512	22.648	22.785	22.922	23.060	23.198	23.337	23.476	23.616
25	23.756	23.897	24.039	24.182	24.326	24.471	24.617	24.764	24.912	25.060
26	25.209	25.359	25.509	25.660	25.812	25.964	26.117	26.271	26.426	26.582
27	26.739	26.897	27.055	27.214	27.374	27.535	27.696	27.858	28.021	28.185
28	28.349	28.514	28.680	28.847	29.015	29.184	29.354	29.525	29.697	29.870
29	30.043	30.217	30.392	30.568	30.745	30.923	31.102	31.281	31.461	31.642
30	31.824	32.007	32.191	32.376	32.561	32.747	32.934	33.122	33.312	33.503
31	33.695	33.888	34.082	34.276	34.471	34.667	34.864	35.062	35.261	35.462
32	35.663	35.865	36.068	36.272	36.477	36.683	36.891	37.099	37.308	37.518
33	37.729	37.942	38.155	38.369	38.584	38.801	39.018	39.237	39.457	39.677
34	39.898	40.121	40.344	40.569	40.796	41.023	41.251	41.480	41.710	41.942
35	42.175	42.409	42.644	42.880	43.117	43.355	43.595	43.836	44.078	44.320
36	44.563	44.808	45.054	45.301	45.549	45.799	46.050	46.302	46.556	46.811
37	47.067	47.324	47.582	47.841	48.102	48.364	48.627	48.891	49.157	49.424
38	49.692	49.961	50.231	50.502	50.774	51.048	51.323	51.600	51.879	52.160
39	52.442	52.725	53.009	53.294	53.580	53.867	54.156	54.446	54.737	55.030
40	55.324	55.61	55.91	56.21	56.51	56.81	57.11	57.41	57.72	58.03
41	58.34	58.65	58.96	59.27	59.58	59.90	60.22	60.54	60.86	61.18
42	61.50	61.82	62.14	62.47	62.80	63.13	63.46	63.79	64.12	64.46
43	64.80	65.14	65.48	65.82	66.16	66.51	66.86	67.21	67.56	67.91
44	68.26	68.61	68.97	69.33	69.69	70.05	70.41	70.77	71.14	71.51
45	71.88	72.25	72.62	72.99	73.36	73.74	74.12	74.50	74.88	75.26
46	75.65	76.04	76.43	76.82	77.21	77.60	78.00	78.40	78.80	79.20
47	79.60	80.00	80.41	80.82	81.23	81.64	82.05	82.46	82.87	83.29
48	83.71	84.13	84.56	84.99	85.42	85.85	86.28	86.71	87.14	87.58
49	88.02	88.46	88.90	89.34	89.79	90.24	90.69	91.14	91.59	92.05

t, °C	0	1	2	3	4	5	6	7	8	9
50	92.51	97.20	102.09	107.20	112.51	118.04	123.80	129.82	136.08	142.60
60	149.38	156.43	163.77	171.38	179.31	187.54	196.09	204.96	214.17	223.73
70	233.7	243.9	254.6	265.7	277.2	289.1	301.4	314.1	327.3	341.0
80	355.1	369.7	384.9	400.6	416.8	433.6	450.9	468.7	487.1	506.1
90	525.76	527.76	529.77	531.78	533.80	535.82	537.86	539.90	541.95	544.00
91	546.05	548.11	550.18	552.26	554.35	556.44	558.53	560.64	562.75	564.87
92	566.99	569.12	571.26	573.40	575.55	577.71	579.87	582.04	584.22	586.41
93	588.60	590.80	593.00	595.21	597.43	599.66	601.89	604.13	606.38	608.64
94	610.90	613.17	615.44	617.72	620.01	622.31	624.61	626.92	629.24	631.57
95	633.90	636.24	638.59	640.94	643.30	645.67	648.05	650.43	652.82	655.22
96	657.62	660.03	662.45	664.88	667.31	669.75	672.20	674.66	677.12	679.69
97	682.07	684.55	687.04	689.54	692.05	694.57	697.10	699.63	702.17	704.71
98	707.27	709.83	712.40	714.98	717.56	720.15	722.75	725.36	727.98	730.61
99	733.24	735.88	738.53	741.18	743.85	746.52	749.20	751.89	754.58	757.29
100	760.00	762.72	765.45	768.19	770.93	773.68	776.44	779.22	782.00	784.78
101	787.57	790.37	793.18	796.00	798.82	801.66	804.50	807.35	810.21	813.06

*From the Physikalisch-technische Reichsanstalt, Holborn, Scheel, and Henning, *Wärmetabellen*, Friedrich Vieweg & Sohn, Brunswick, 1909. By permission. For data at 50(0.2)101.8°C, see *Handbook of Chemistry and Physics*, 40th ed., p. 2326, Chemical Rubber Publishing Co. For a tabulation of temperature for pressures 700(1)779 mm Hg, see Atack, *Handbook of Chemical Data*, p. 117, Reinhold, New York, 1957. For a tabulation of pressure for 105(5)200(10)370°C, see Atack, p. 134, and for 100(1)374°C, see *Handbook of Chemistry and Physics*, 40th ed., pp. 2328–2330, Chemical Rubber Publishing Co.

TABLE 2-7 Vapor Pressures of Inorganic Compounds, up to 1 atm*

Compound		Pressure, mm Hg										Melting point, °C
Name	Formula	1	5	10	20	40	60	100	200	400	760	
		Temperature, °C										
Aluminum borohydride	Al (BH ₄) ₃	1284	1421	1487	1555	1635	1684	1749	1844	1947	2056	660
bromide	AlBr ₃	81.3	103.8	118.0	134.0	150.6	161.7	176.1	199.8	227.0	256.3	-64.
chloride	Al ₂ Cl ₆	100.0	116.4	123.8	131.8	139.9	145.4	152.0	161.8	171.6	180.2	97.
fluoride	AlF ₃	1238	1298	1324	1350	1378	1398	1422	1457	1496	1537	1040
iodide	AlI ₃	178.0	207.7	225.8	244.2	265.0	277.8	294.5	322.0	354.0	385.5	
oxide	Al ₂ O ₃	2148	2306	2385	2465	2549	2599	2665	2766	2874	2977	2050
Ammonia heavy	NH ₃	-109.1	-97.5	-91.9	-85.8	-79.2	-74.3	-68.4	-57.0	-45.4	-33.6	-77.7
	ND ₃						-74.0	-67.4	-57.0	-45.4	-33.4	-74.0
Ammonium bromide	NH ₄ Br	198.3	234.5	252.0	270.6	290.0	303.8	320.0	345.3	370.8	396.0	
carbamate	N ₂ H ₆ CO ₂	-26.1	-10.4	-2.9	+5.3	14.0	19.6	26.7	37.2	48.0	58.3	
chloride	NH ₄ Cl	160.4	193.8	209.8	226.1	245.0	256.2	271.5	293.2	316.5	337.8	520
cyanide	NH ₄ CN	-50.6	-35.7	-28.6	-20.9	-12.6	-7.4	-0.5	+9.6	20.5	31.7	36
hydrogen sulfide	NH ₄ HS	-51.1	-36.0	-28.7	-20.8	-12.3	-7.0	0.0	+10.5	21.8	33.3	
iodide	NH ₄ I	210.9	247.0	263.5	282.8	302.8	316.0	331.8	355.8	381.0	404.9	
Antimony	Sb	886	984	1033	1084	1141	1176	1223	1288	1364	1440	630.5
tribromide	SbBr ₃	93.9	126.0	142.7	158.3	177.4	188.1	203.5	225.7	250.2	275.0	96.6
trichloride	SbCl ₃	49.2	71.4	85.2	100.6	117.8	128.3	143.3	165.9	192.2	219.0	73.4
pentachloride	SbCl ₅	22.7	48.6	61.8	75.8	91.0	101.0	114.1				2.8
triiodide	SbI ₃	163.6	203.8	223.5	244.8	267.8	282.5	303.5	333.8	368.5	401.0	167
trioxide	Sb ₂ O ₆	574	626	666	729	812	873	957	1085	1242	1425	656
Argon	Ar	-218.2	-213.9	-210.9	-207.9	-204.9	-202.9	-200.5	-195.6	-190.6	-185.6	-189.2
Arsenic	As	372	416	437	459	483	498	518	548	579	610	814
Arsenic tribromide	AsBr ₃	41.8	70.6	85.2	101.3	118.7	130.0	145.2	167.7	193.6	220.0	
trichloride	AsCl ₃	-11.4	+11.7	+23.5	36.0	50.0	58.7	70.9	89.2	109.7	130.4	-18
trifluoride	AsF ₃					-2.5	+4.2	13.2	26.7	41.4	56.3	-5.9
pentafluoride	AsF ₅	-117.9	-108.0	-103.1	-98.0	-92.4	-88.5	-84.3	-75.5	-64.0	-52.8	-79.8
trioxide	As ₂ O ₃	212.5	242.6	259.7	279.2	299.2	310.3	332.5	370.0	412.2	457.2	312.8
Arsine	AsH ₃	-142.6	-130.8	-124.7	-117.7	-110.2	-104.8	-98.0	-87.2	-75.2	-62.1	-116.3
Barium	Ba		984	1049	1120	1195	1240	1301	1403	1518	1638	850
Beryllium borohydride	Be (BH ₄) ₂	+1.0	19.8	28.1	36.8	46.2	51.7	58.6	69.0	79.7	90.0	123
bromide	BeBr ₂	289	325	342	361	379	390	405	427	451	474	490
chloride	BeCl ₂	291	328	346	365	384	395	411	435	461	487	405
iodide	BeI ₂	283	322	341	361	382	394	411	435	461	487	488
Bismuth	Bi	1021	1099	1136	1177	1217	1240	1271	1319	1370	1420	271
tribromide	BiBr ₃		261	282	305	327	340	360	392	425	461	218
trichloride	BiCl ₃		242	264	287	311	324	343	372	405	441	230
Diborane hydrobromide	B ₂ H ₆ Br	-93.3	-75.3	-66.3	-56.4	-45.4	-38.2	-29.0	-15.4	0.0	+16.3	-104.2
Borine carbonyl	BH ₃ CO	-139.2	-127.3	-121.1	-114.1	-106.6	-101.9	-95.3	-85.5	-74.8	-64.0	-137.0
triamine	B ₃ N ₃ H ₆	-63.0	-45.0	-35.3	-25.0	-13.2	-5.8	+4.0	18.5	34.3	50.6	-58.2
Boron hydrides												
dihydrodecaborane	B ₁₀ H ₁₄	60.0	80.8	90.2	100.0	117.4	127.8	142.3	163.8			99.6
dihydrodiborane	B ₂ H ₆	-159.7	-149.5	-144.3	-138.5	-131.6	-127.2	-120.9	-111.2	-99.6	-86.5	-169
dihydropentaborane	B ₅ H ₉		-40.4	-30.7	-20.0	-8.0	-0.4	+9.6	24.6	40.8	58.1	-47.0
tetrahydropentaborane	B ₅ H ₁₁	-50.2	-29.9	-19.9	-9.2	+2.7	10.2	20.1	34.8	51.2	67.0	
tetrahydrotetraborane	B ₄ H ₁₀	-90.9	-73.1	-64.3	-54.8	-44.3	-37.4	-28.1	-14.0	+0.8	16.1	-119.9
Boron tribromide	BBR ₃	-41.4	-20.4	-10.1	+1.5	14.0	22.1	33.5	50.3	70.0	91.7	-45
trichloride	BBr ₃	-91.5	-75.2	-66.9	-57.9	-47.8	-41.2	-32.4	-18.9	-3.6	+12.7	-107
trifluoride	BF ₃	-154.6	-145.4	-141.3	-136.4	-131.0	-127.6	-123.0	-115.9	-108.3	-100.7	-126.8
Bromine	Br ₂	-48.7	-32.8	-25.0	-16.8	-8.0	-0.6	+9.3	24.3	41.0	58.2	-7.3
pentafluoride	BrF ₅	-69.3	-51.0	-41.9	-32.0	-21.0	-14.0	-4.5	+9.9	25.7	40.4	-61.4
Cadmium	Cd	394	455	484	516	553	578	611	658	711	765	320.9
chloride	CdCl ₂		618	656	695	736	762	797	847	908	967	568
fluoride	CdF ₂	1112	1231	1286	1344	1400	1436	1486	1561	1651	1751	520
iodide	CdI ₂	416	481	512	546	584	608	640	688	742	796	385
oxide	CdO	1000	1100	1149	1200	1257	1295	1341	1409	1484	1559	
Calcium	Ca		926	983	1046	1111	1152	1207	1288	1388	1487	851
Carbon (graphite)	C	3586	3828	3946	4069	4196	4273	4373	4516	4660	4827	
dioxide	CO ₂	-134.3	-124.4	-119.5	-114.4	-108.6	-104.8	-100.2	-93.0	-85.7	-78.2	-57.5
disulfide	CS ₂	-73.8	-54.3	-44.7	-34.3	-22.5	-15.3	-5.1	+10.4	28.0	46.5	-110.8
monoxide	CO	-222.0	-217.2	-215.0	-212.8	-210.0	-208.1	-205.7	-201.3	-196.3	-191.3	-205.0
oxyselenide	COSe	-117.1	-102.3	-95.0	-86.3	-76.4	-70.2	-61.7	-49.8	-35.6	-21.9	
oxysulfide	COS	-132.4	-119.8	-113.3	-106.0	-98.3	-93.0	-85.9	-75.0	-62.7	-49.9	-138.8
selenosulfide	CSeS	-47.3	-26.5	-16.0	-4.4	+8.6	17.0	28.3	45.7	65.2	85.6	-75.2
suboxide	C ₃ S ₂	14.0	41.2	54.9	69.3	85.6	96.0	109.9	130.8			+0.4
tetrabromide	CBR ₄					96.3	106.3	119.7	139.7	163.5	189.5	90.1
tetrachloride	CCl ₄	-50.0	-30.0	-19.6	-8.2	+4.3	12.3	23.0	38.3	57.8	76.7	-22.6
tetrafluoride	CF ₄	-184.6	-174.1	-169.3	-164.3	-158.8	-155.4	-150.7	-143.6	-135.5	-127.7	-183.7
Cesium	Cs	279	341	375	409	449	474	509	561	624	690	28.5
bromide	CsBr	748	838	887	938	993	1026	1072	1140	1221	1300	636
chloride	CsCl	744	837	884	934	989	1023	1069	1139	1217	1300	646
fluoride	CsF	712	798	844	893	947	980	1025	1092	1170	1251	683
iodide	CsI	738	828	873	923	976	1009	1055	1124	1200	1280	621

*Compiled from the extended tables published by D. R. Stull in *Ind. Eng. Chem.*, **39**, 517 (1947).

TABLE 2-7 Vapor Pressures of Inorganic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
Name	Formula	1	5	10	20	40	60	100	200	400	760	
		Temperature, °C										
Chlorine	Cl ₂	-118.0	-106.7	-101.6	-93.3	-84.5	-79.0	-71.7	-60.2	-47.3	-33.8	-100.7
fluoride	ClF		-143.4	-139.0	-134.3	-128.8	-125.3	-120.8	-114.4	-107.0	-100.5	-145
trifluoride	ClF ₃		-80.4	-71.8	-62.3	-51.3	-44.1	-34.7	-20.7	-4.9	+11.5	-83
monoxide	Cl ₂ O	-98.5	-81.6	-73.1	-64.3	-54.3	-48.0	-39.4	-26.5	-12.5	+2.2	-116
dioxide	ClO ₂			-59.0	-51.2	-42.8	-37.2	-29.4	-17.8	-4.0	+11.1	-59
heptoxide	Cl ₂ O ₇	-45.3	-23.8	-13.2	-2.1	+10.3	+18.2	29.1	44.6	62.2	78.8	-91
Chlorosulfonic acid	HSO ₃ Cl	32.0	53.5	64.0	75.3	87.6	95.2	105.3	120.0	136.1	151.0	-80
Chromium	Cr	1616	1768	1845	1928	2013	2067	2139	2243	2361	2482	1615
carbonyl	Cr(CO) ₆	36.0	58.0	68.3	79.5	91.2	98.3	108.0	121.8	137.2	151.0	
oxychloride	CrO ₂ Cl ₂	-18.4	+3.2	13.8	25.7	38.5	46.7	58.0	75.2	95.2	117.1	
Cobalt chloride	CoCl ₂					770	801	843	904	974	1050	735
nitrosyl tricarbonyl	Co(CO) ₃ NO				-1.3	+11.0	18.5	29.0	44.4	62.0	80.0	-11
Columbium fluoride	CbF ₅			86.3	103.0	121.5	133.2	148.5	172.2	198.0	225.0	75.5
Copper	Cu	1628	1795	1879	1970	2067	2127	2207	2325	2465	2595	1083
Cuprous bromide	Cu ₂ Br ₂	572	666	718	777	844	887	951	1052	1189	1355	504
chloride	Cu ₂ Cl ₂	546	645	702	766	838	886	960	1077	1249	1490	422
iodide	Cu ₂ I ₂		610	656	716	786	836	907	1018	1158	1336	605
Cyanogen	C ₂ N ₂	-95.8	-83.2	-76.8	-70.1	-62.7	-57.9	-51.8	-42.6	-33.0	-21.0	-34.4
bromide	CNBr	-35.7	-18.3	-10.0	-1.0	+8.6	14.7	22.6	33.8	46.0	61.5	58
chloride	CNCl	-76.7	-61.4	-53.8	-46.1	-37.5	-32.1	-24.9	-14.1	-2.3	+13.1	-6.5
fluoride	CNF	-134.4	-123.8	-118.5	-112.8	-106.4	-102.3	-97.0	-89.2	-80.5	-72.6	
Deuterium cyanide	DCN	-68.9	-54.0	-46.7	-38.8	-30.1	-24.7	-17.5	-5.4	+10.0	26.2	-12
Fluorine	F ₂	-223.0	-216.9	-214.1	-211.0	-207.7	-205.6	-202.7	-198.3	-193.2	-187.9	-223
oxide	F ₂ O	-196.1	-186.6	-182.3	-177.8	-173.0	-170.0	-165.8	-159.0	-151.9	-144.6	-223.9
Germanium bromide	GeBr ₄		43.3	56.8	71.8	88.1	98.8	113.2	135.4	161.6	189.0	26.1
chloride	GeCl ₄	-45.0	-24.9	-15.0	-4.1	+8.0	16.2	27.5	44.4	63.8	84.0	-49.5
hydride	GeH ₄	-163.0	-151.0	-145.3	-139.2	-131.6	-126.7	-120.3	-111.2	-100.2	-88.9	-165
Trichlorogermane	GeHCl ₃	-41.3	-22.3	-13.0	-3.0	+8.8	16.2	26.5	41.6	58.3	75.0	-71.1
Tetramethylgermane	Ge(CH ₃) ₄	-73.2	-54.6	-45.2	-35.0	-23.4	-16.2	-6.3	+8.8	26.0	44.0	-88
Digermene	Ge ₂ H ₆	-88.7	-69.8	-60.1	-49.9	-38.2	-30.7	-20.3	-4.7	+13.3	31.5	-109
Trigermene	Ge ₃ H ₈	-36.9	-12.8	-0.9	+11.8	26.3	35.5	47.9	67.0	88.6	110.8	-105.6
Gold	Au	1869	2059	2154	2256	2363	2431	2521	2657	2807	2966	1063
Helium	He	-271.7	-271.5	-271.3	-271.1	-270.7	-270.6	-270.3	-269.8	-269.3	-268.6	
para-Hydrogen	H ₂	-263.3	-261.9	-261.3	-260.4	-259.6	-258.9	-257.9	-256.3	-254.5	-252.5	-259.1
Hydrogen bromide	HBr	-138.8	-127.4	-121.8	-115.4	-108.3	-103.8	-97.7	-88.1	-78.0	-66.5	-87.0
chloride	HCl	-150.8	-140.7	-135.6	-130.0	-123.8	-119.6	-114.0	-105.2	-95.3	-84.8	-114.3
cyanide	HCN	-71.0	-55.3	-47.7	-39.7	-30.9	-25.1	-17.8	-5.3	+10.2	25.9	-13.2
fluoride	H ₂ F ₂		-74.7	-65.8	-56.0	-45.0	-37.9	-28.2	-13.2	+2.5	19.7	-83.7
iodide	HI	-123.3	-109.6	-102.3	-94.5	-85.6	-79.8	-72.1	-60.3	-48.3	-35.1	-50.9
oxide (water)	H ₂ O	-17.3	+1.2	11.2	22.1	34.0	41.5	51.6	66.5	83.0	100.0	0.0
sulfide	H ₂ S	-134.3	-122.4	-116.3	-109.7	-102.3	-97.9	-91.6	-82.3	-71.8	-60.4	-85.5
disulfide	HSSH	-43.2	-24.4	-15.2	-5.1	+6.0	12.8	22.0	35.3	49.6	64.0	-89.7
selenide	H ₂ Se	-115.3	-103.4	-97.9	-91.8	-84.7	-80.2	-74.2	-65.2	-53.6	-41.1	-64
telluride	H ₂ Te	-96.4	-82.4	-75.4	-67.8	-59.1	-53.7	-45.7	-32.4	-17.2	-2.0	-49.0
Iodine	I ₂	38.7	62.2	73.2	84.7	97.5	105.4	116.5	137.3	159.8	183.0	112.9
heptafluoride	IF ₇	-87.0	-70.7	-63.0	-54.5	-45.3	-39.4	-31.9	-20.7	-8.3	+4.0	5.5
Iron	Fe	1787	1957	2039	2128	2224	2283	2360	2475	2605	2735	1535
pentacarbonyl	Fe(CO) ₅		-6.5	+4.6	16.7	30.3	39.1	50.3	68.0	86.1	105.0	-21
Ferric chloride	Fe ₂ Cl ₆	194.0	221.8	235.5	246.0	256.8	263.7	272.5	285.0	298.0	319.0	304
Ferrous chloride	FeCl ₂			700	737	779	805	842	897	961	1026	
Krypton	Kr	-199.3	-191.3	-187.2	-182.9	-178.4	-175.7	-171.8	-165.9	-159.0	-152.0	-156.7
Lead	Pb	973	1099	1162	1234	1309	1358	1421	1519	1630	1744	327.5
bromide	PbBr ₂	513	578	610	646	686	711	745	796	856	914	373
chloride	PbCl ₂	547	615	648	684	725	750	784	833	893	954	501
fluoride	PbF ₂		861	904	950	1003	1036	1080	1144	1219	1293	855
iodide	PbI ₂	479	540	571	605	644	668	701	750	807	872	402
oxide	PbO	943	1039	1085	1134	1189	1222	1265	1330	1402	1472	890
sulfide	PbS	852	928	975	1005	1048	1074	1108	1160	1221	1281	1114
Lithium	Li	723	838	881	940	1003	1042	1097	1178	1273	1372	186
bromide	LiBr	748	840	888	939	994	1028	1076	1147	1226	1310	547
chloride	LiCl	783	880	932	987	1045	1081	1129	1203	1290	1382	614
fluoride	LiF	1047	1156	1211	1270	1333	1372	1425	1503	1591	1681	870
iodide	LiI	723	802	841	883	927	955	993	1049	1110	1171	446
Magnesium	Mg	621	702	743	789	838	868	909	967	1034	1107	651
chloride	MgCl ₂	778	877	930	988	1050	1088	1142	1223	1316	1418	712
Manganese	Mn	1292	1434	1505	1583	1666	1720	1792	1900	2029	2151	1260
chloride	MnCl ₂		736	778	825	879	913	960	1028	1108	1190	650
Mercury	Hg	126.2	164.8	184.0	204.6	228.8	242.0	261.7	290.7	323.0	357.0	-38.9
Mercuric bromide	HgBr ₂	136.5	165.3	179.8	194.3	211.5	221.0	237.8	262.7	290.0	319.0	237
chloride	HgCl ₂	136.2	166.0	180.2	195.8	212.5	222.2	237.0	256.5	275.5	304.0	277
iodide	HgI ₂	157.5	189.2	204.5	220.0	238.2	249.0	261.8	291.0	324.2	354.0	259
Molybdenum	Mo	3102	3393	3535	3690	3859	3964	4109	4322	4553	4804	2622
hexafluoride	MoF ₆	-65.5	-49.0	-40.8	-32.0	-22.1	-16.2	-8.0	+4.1	17.2	36.0	17
oxide	MoO ₃	734	785	814	851	892	917	955	1014	1082	1151	795

TABLE 2-7 Vapor Pressures of Inorganic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
Name	Formula	1	5	10	20	40	60	100	200	400	760	
		Temperature, °C										
Neon	Ne	-257.3	-255.5	-254.6	-253.7	-252.6	-251.9	-251.0	-249.7	-248.1	-246.0	-248.7
Nickel	Ni	1810	1979	2057	2143	2234	2289	2364	2473	2603	2732	1452
carbonyl chloride	Ni(CO) ₄					-23.0	-15.9	-6.0	+8.8	25.8	42.5	-25
	NiCl ₂	671	731	759	789	821	840	866	904	945	987	1001
Nitrogen	N ₂	-226.1	-221.3	-219.1	-216.8	-214.0	-212.3	-209.7	-205.6	-200.9	-195.8	-210.0
Nitric oxide	NO	-184.5	-180.6	-178.2	-175.3	-171.7	-168.9	-166.0	-162.3	-156.8	-151.7	-161
Nitrogen dioxide	NO ₂	-55.6	-42.7	-36.7	-30.4	-23.9	-19.9	-14.7	-5.0	+8.0	21.0	-9.3
Nitrogen pentoxide	N ₂ O ₅	-36.8	-23.0	-16.7	-10.0	-2.9	+1.8	7.4	15.6	24.4	32.4	30
Nitrous oxide	N ₂ O	-143.4	-133.4	-128.7	-124.0	-118.3	-114.9	-110.3	-103.6	-96.2	-85.5	-90.9
Nitrosyl chloride	NOCl					-60.2	-54.2	-46.3	-34.0	-20.3	-6.4	-64.5
fluoride	NOF	-132.0	-120.3	-114.3	-107.8	-100.3	-95.7	-88.8	-79.2	-68.2	-56.0	-134
Osmium tetroxide (yellow)	OsO ₄	3.2	22.0	31.3	41.0	51.7	59.4	71.5	89.5	109.3	130.0	56
(white)	OsO ₄	-5.6	+15.6	26.0	37.4	50.5	59.4	71.5	89.5	109.3	130.0	42
Oxygen	O ₂	-219.1	-213.4	-210.6	-207.5	-204.1	-201.9	-198.8	-194.0	-188.8	-183.1	-218.7
Ozone	O ₃	-180.4	-168.6	-163.2	-157.2	-150.7	-146.7	-141.0	-132.6	-122.5	-111.1	-251
Phosgene	COCl ₂	-92.9	-77.0	-69.3	-60.3	-50.3	-44.0	-35.6	-22.3	-7.6	+8.3	-104
Phosphorus (yellow)	P	76.6	111.2	128.0	146.2	166.7	179.8	197.3	222.7	251.0	280.0	44.1
(violet)	P	237	271	287	306	323	334	349	370	391	417	590
tribromide	PBr ₃	7.8	34.4	47.8	62.4	79.0	89.8	103.6	125.2	149.7	175.3	-40
trichloride	PCl ₃	-51.6	-31.5	-21.3	-10.2	+2.3	10.2	21.0	37.6	56.9	74.2	-111.8
pentachloride	PCl ₅	55.5	74.0	83.2	92.5	102.5	108.3	117.0	131.3	147.2	162.0	
Phosphine	PH ₃					-129.4	-125.0	-118.8	-109.4	-98.3	-87.5	-132.5
Phosphonium bromide	PH ₄ Br	-43.7	-28.5	-21.2	-13.3	-5.0	+0.3	7.4	17.6	28.0	38.3	
chloride	PH ₄ Cl	-91.0	-79.6	-74.0	-68.0	-61.5	-57.3	-52.0	-44.0	-35.4	-27.0	-28.5
iodide	PH ₄ I	-25.2	-9.0	-1.1	+7.3	16.1	21.9	29.3	39.9	51.6	62.3	
Phosphorus trioxide	P ₂ O ₆		39.7	53.0	67.8	84.0	94.2	108.3	129.0	150.3	173.1	22.5
pentoxide	P ₄ O ₁₀	384	424	442	462	481	493	510	532	556	591	569
oxychloride	POCl ₃			2.0	13.6	27.3	35.8	47.4	65.0	84.3	105.1	2
thiobromide	PSBr ₃	50.0	72.4	83.6	95.5	108.0	116.0	126.3	141.8	157.8	175.0	38
thiochloride	PSCl ₃	-18.3	+4.6	16.1	29.0	42.7	51.8	63.8	82.0	102.3	124.0	-36.2
Platinum	Pt	2730	3007	3146	3302	3469	3574	3714	3923	4169	4407	1755
Potassium	K	341	408	443	483	524	550	586	643	708	774	62.3
bromide	KBr	795	892	940	994	1050	1087	1137	1212	1297	1383	730
chloride	KCl	821	919	968	1020	1078	1115	1164	1239	1322	1407	790
fluoride	KF	885	988	1039	1096	1156	1193	1245	1323	1411	1502	880
hydroxide	KOH	719	814	863	918	976	1013	1064	1142	1233	1327	380
iodide	KI	745	840	887	938	995	1030	1080	1152	1238	1324	723
Radon	Rn	-144.2	-132.4	-126.3	-119.2	-111.3	-106.2	-99.0	-87.7	-75.0	-61.8	-71
Rhenium heptoxide	Re ₂ O ₇	212.5	237.5	248.0	261.0	272.0	280.0	289.0	307.0	336.0	362.4	296
Rubidium	Rb	297	358	389	422	459	482	514	563	620	679	38.5
bromide	RbBr	781	876	923	975	1031	1066	1114	1186	1267	1352	682
chloride	RbCl	792	887	937	990	1047	1084	1133	1207	1294	1381	715
fluoride	RbF	921	982	1016	1052	1096	1123	1168	1239	1322	1408	760
iodide	RbI	748	839	884	935	991	1026	1072	1141	1223	1304	642
Selenium	Se	356	413	442	473	506	527	554	594	637	680	217
dioxide	SeO ₂	157.0	187.7	202.5	217.5	234.1	244.6	258.0	277.0	297.7	317.0	340
hexafluoride	SeF ₆	-118.6	-105.2	-98.9	-92.3	-84.7	-80.0	-73.9	-64.8	-55.2	-45.8	-34.7
oxychloride	SeOCl ₂	34.8	59.8	71.9	84.2	98.0	106.5	118.0	134.6	151.7	168.0	8.5
tetrachloride	SeCl ₄	74.0	96.3	107.4	118.1	130.1	137.8	147.5	161.0	176.4	191.5	
Silicon	Si	1724	1835	1888	1942	2000	2036	2083	2151	2220	2287	1420
dioxide	SiO ₂			1732	1798	1867	1911	1969	2053	2141	2227	1710
tetrachloride	SiCl ₄	-63.4	-44.1	-34.4	-24.0	-12.1	-4.8	+5.4	21.0	38.4	56.8	-68.8
tetrafluoride	SiF ₄	-144.0	-134.8	-130.4	-125.9	-120.8	-117.5	-113.3	-107.2	-100.7	-94.8	-90
Trichlorofluorosilane	SiFCl ₃	-92.6	-76.4	-68.3	-59.0	-48.8	-42.2	-33.2	-19.3	-4.0	+12.2	-120.8
Iodosilane	SiH ₃ I		-53.0	-47.7	-33.4	-21.8	-14.3	-4.4	+10.7	27.9	45.4	-57.0
Diiodosilane	SiH ₂ I ₂		3.8	18.0	34.1	52.6	64.0	79.4	101.8	125.5	149.5	-1.0
Disiloxan	(SiH ₃) ₂ O	-112.5	-95.8	-88.2	-79.8	-70.4	-64.2	-55.9	-43.5	-29.3	-15.4	-144.2
Trisilane	Si ₃ H ₈	-68.9	-49.7	-40.0	-29.0	-16.9	-9.0	+1.6	17.8	35.5	53.1	-117.2
Trisilazane	(SiH ₃) ₃ N	-68.7	-49.9	-40.4	-30.0	-18.5	-11.0	-1.1	+14.0	31.0	48.7	-105.7
Tetrasilane	Si ₄ H ₁₀	-27.7	-6.2	+4.3	15.8	28.4	36.6	47.4	63.6	81.7	100.0	-93.6
Octachlorotrisilane	Si ₃ Cl ₈	46.3	74.7	89.3	104.2	121.5	132.0	146.0	166.2	189.5	211.4	
Hexachlorodisiloxane	(SiCl ₃) ₂ O	-5.0	17.8	29.4	41.5	55.2	63.8	75.4	92.5	113.6	135.6	-33.2
Hexachlorodisilane	Si ₂ Cl ₆	+4.0	27.4	38.8	51.5	65.3	73.9	85.4	102.2	120.6	139.0	-1.2
Tribromosilane	SiHBr ₃	-30.5	-8.0	+3.4	16.0	30.0	39.2	51.6	70.2	90.2	111.8	-73.5
Trichlorosilane	SiHCl ₃	-80.7	-62.6	-53.4	-43.8	-32.9	-25.8	-16.4	-1.8	+14.5	31.8	-126.6
Trifluorosilane	SiHF ₃	-152.0	-142.7	-138.2	-132.9	-127.3	-123.7	-118.7	-111.3	-102.8	-95.0	-131.4
Dibromosilane	SiH ₂ Br ₂	-60.9	-40.0	-29.4	-18.0	-5.2	+3.2	14.1	31.6	50.7	70.5	-70.2
Difluorosilane	SiH ₂ F ₂	-146.7	-136.0	-130.4	-124.3	-117.6	-113.3	-107.3	-98.3	-87.6	-77.8	
Monobromosilane	SiH ₃ Br		-85.7	-77.3	-68.3	-57.8	-51.1	-42.3	-28.6	-13.3	+2.4	-93.9
Monochlorosilane	SiH ₃ Cl	-117.8	-104.3	-97.7	-90.1	-81.8	-76.0	-68.5	-57.0	-44.5	-30.4	
Monofluorosilane	SiH ₃ F	-153.0	-145.5	-141.2	-136.3	-130.8	-127.2	-122.4	-115.2	-106.8	-98.0	
Tribromofluorosilane	SiFBr ₃	-46.1	-25.4	-15.1	-3.7	+9.2	17.4	28.6	45.7	64.6	83.8	-82.5
Dichlorodifluorosilane	SiF ₂ Cl ₂	-124.7	-110.5	-102.9	-94.5	-85.0	-78.6	-70.3	-58.0	-45.0	-31.8	-139.7
Trifluorobromosilane	SiF ₃ Br								-69.8	-55.9	-41.7	-70.5

TABLE 2-7 Vapor Pressures of Inorganic Compounds, up to 1 atm (Concluded)

Compound		Pressure, mm Hg										Melting point, °C
Name	Formula	1	5	10	20	40	60	100	200	400	760	
		Temperature, °C										
Trifluorochlorosilane	SiF ₃ Cl	−144.0	−133.0	−127.0	−120.5	−112.8	−108.2	−101.7	−91.7	−81.0	−70.0	−142
Hexafluorodisilane	Si ₂ F ₆	−81.0	−68.8	−63.1	−57.0	−50.6	−46.7	−41.7	−34.2	−26.4	−18.9	−18.6
Dichlorofluorobromosilane	SiFCl ₂ Br	−86.5	−68.4	−59.0	−48.8	−37.0	−29.0	−19.5	−3.2	+15.4	35.4	−112.3
Dibromochlorofluorosilane	SiFClBr ₂	−65.2	−45.5	−35.6	−24.5	−12.0	−4.7	+6.3	23.0	43.0	59.5	−99.3
Silane	SiH ₄	−179.3	−168.6	−163.0	−156.9	−150.3	−146.3	−140.5	−131.6	−122.0	−111.5	−185
Disilane	Si ₂ H ₆	−114.8	−99.3	−91.4	−82.7	−72.8	−66.4	−57.5	−44.6	−29.0	−14.3	−132.6
Silver	Ag	1357	1500	1575	1658	1743	1795	1865	1971	2090	2212	960.5
chloride	AgCl	912	1019	1074	1134	1200	1242	1297	1379	1467	1564	455
iodide	AgI	820	927	983	1045	1111	1152	1210	1297	1400	1506	552
Sodium	Na	439	511	549	589	633	662	701	758	823	892	97.5
bromide	NaBr	806	903	952	1005	1063	1099	1148	1220	1304	1392	755
chloride	NaCl	865	967	1017	1072	1131	1169	1220	1296	1379	1465	800
cyanide	NaCN	817	928	983	1046	1115	1156	1214	1302	1401	1497	564
fluoride	NaF	1077	1186	1240	1300	1363	1403	1455	1531	1617	1704	992
hydroxide	NaOH	739	843	897	953	1017	1057	1111	1192	1286	1378	318
iodide	NaI	767	857	903	952	1005	1039	1083	1150	1225	1304	651
Strontium	Sr		847	898	953	1018	1057	1111	1192	1285	1384	800
Strontium oxide	SrO	2068	2198	2262	2333	2410						2430
Sulfur	S	183.8	223.0	243.8	264.7	288.3	305.5	327.2	359.7	399.6	444.6	112.8
monochloride	S ₂ Cl ₂	−7.4	+15.7	27.5	40.0	54.1	63.2	75.3	93.5	115.4	138.0	−80
hexafluoride	SF ₆	−132.7	−120.6	−114.7	−108.4	−101.5	−96.8	−90.9	−82.3	−72.6	−63.5	−50.2
Sulfuryl chloride	SO ₂ Cl ₂		−35.1	−24.8	−13.4	−1.0	+7.2	17.8	33.7	51.3	69.2	−54.1
Sulfur dioxide	SO ₂	−95.5	−83.0	−76.8	−69.7	−60.5	−54.6	−46.9	−35.4	−23.0	−10.0	−73.2
trioxide (α)	SO ₃	−39.0	−23.7	−16.5	−9.1	−1.0	+4.0	10.5	20.5	32.6	44.8	16.8
trioxide (β)	SO ₃	−34.0	−19.2	−12.3	−4.9	+3.2	8.0	14.3	23.7	32.6	44.8	32.3
trioxide (γ)	SO ₃	−15.3	−2.0	+4.3	11.1	17.9	21.4	28.0	35.8	44.0	51.6	62.1
Tellurium	Te	520	605	650	697	753	789	838	910	997	1087	452
chloride	TeCl ₄			233	253	273	287	304	330	360	392	224
fluoride	TeF ₆	−111.3	−98.8	−92.4	−86.0	−78.4	−73.8	−67.9	−57.3	−48.2	−38.6	−37.8
Thallium	Tl	825	931	983	1040	1103	1143	1196	1274	1364	1457	303.5
Thallous bromide	TlBr		490	522	559	598	621	653	703	759	819	460
chloride	TlCl		487	517	550	589	612	645	694	748	807	430
iodide	TlI	440	502	531	567	607	631	663	712	763	823	440
Thionyl bromide	SOBr ₂	−6.7	+18.4	31.0	44.1	58.8	68.3	80.6	99.0	119.2	139.5	−52.2
Thionyl chloride	SOCl ₂	−52.9	−32.4	−21.9	−10.5	+2.2	10.4	21.4	37.9	56.5	75.4	−104.5
Tin	Sn	1492	1634	1703	1777	1855	1903	1968	2063	2169	2270	231.9
Stannic bromide	SnBr ₄		58.3	72.7	88.1	105.5	116.2	131.0	152.8	177.7	204.7	31.0
Stannous chloride	SnCl ₂	316	366	391	420	450	467	493	533	577	623	246.8
Stannic chloride	SnCl ₄	−22.7	−1.0	+10.0	22.0	35.2	43.5	54.7	72.0	92.1	113.0	−30.2
iodide	SnI ₄		156.0	175.8	196.2	218.8	234.2	254.2	283.5	315.5	348.0	144.5
hydride	SnH ₄	−140.0	−125.8	−118.5	−111.2	−102.3	−96.6	−89.2	−78.0	−65.2	−52.3	−149.9
Tin tetramethyl	Sn(CH ₃) ₄	−51.3	−31.0	−20.6	−9.3	+3.5	11.7	22.8	39.8	58.5	78.0	
trimethyl-ethyl	Sn(CH ₃) ₃ -C ₂ H ₅	−30.0	−7.6	+3.8	16.1	30.0	38.4	50.0	67.3	87.6	108.8	
trimethyl-propyl	Sn(CH ₃) ₃ -C ₃ H ₇	−12.0	+10.7	21.8	34.0	48.5	57.5	69.8	88.0	109.6	131.7	
Titanium chloride	TiCl ₄	−13.9	+9.4	21.3	34.2	48.4	58.0	71.0	90.5	112.7	136.0	−30
Tungsten	W	3990	4337	4507	4690	4886	5007	5168	5403	5666	5927	3370
Tungsten hexafluoride	WF ₆	−71.4	−56.5	−49.2	−41.5	−33.0	−27.5	−20.3	−10.0	+1.2	17.3	−0.5
Uranium hexafluoride	UF ₆	−38.8	−22.0	−13.8	−5.2	+4.4	10.4	18.2	30.0	42.7	55.7	69.2
Vanadyl trichloride	VOCl ₃	−23.2	+0.2	12.2	26.6	40.0	49.8	62.5	82.0	103.5	127.2	
Xenon	Xe	−168.5	−158.2	−152.8	−147.1	−141.2	−137.7	−132.8	−125.4	−117.1	−108.0	−111.6
Zinc	Zn	487	558	593	632	673	700	736	788	844	907	419.4
chloride	ZnCl ₂	428	481	508	536	566	584	610	648	689	732	365
fluoride	ZnF ₂	970	1055	1086	1129	1175	1207	1254	1329	1417	1497	872
diethyl	Zn(C ₂ H ₅) ₂	−22.4	0.0	+11.7	24.2	38.0	47.2	59.1	77.0	97.3	118.0	−28
Zirconium bromide	ZrBr ₄	207	237	250	266	281	289	301	318	337	357	450
chloride	ZrCl ₄	190	217	230	243	259	268	279	295	312	331	437
iodide	ZrI ₄	264	297	311	329	344	355	369	389	409	431	499

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm*

Compound		Pressure, mm Hg									Melting point, °C	
		1	5	10	20	40	60	100	200	400		760
Name	Formula	Temperature, °C										
Acenaphthalene	C ₁₂ H ₁₀		114.8	131.2	148.7	168.2	181.2	197.5	222.1	250.0	277.5	95
Acetal	C ₆ H ₁₄ O ₂	-23.0	-2.3	+8.0	19.6	31.9	39.8	50.1	66.3	84.0	102.2	
Acetaldehyde	C ₂ H ₄ O	-81.5	-65.1	-56.8	-47.8	-37.8	-31.4	-22.6	-10.0	+4.9	20.2	-123.5
Acetamide	C ₂ H ₅ NO	65.0	92.0	105.0	120.0	135.8	145.8	158.0	178.3	200.0	222.0	81
Acetanilide	C ₈ H ₉ NO	114.0	146.6	162.0	180.0	199.6	211.8	227.2	250.5	277.0	303.8	113.5
Acetic acid	C ₂ H ₄ O ₂	-17.2	+6.3	17.5	29.9	43.0	51.7	63.0	80.0	99.0	118.1	16.7
anhydride	C ₄ H ₆ O ₃	1.7	24.8	36.0	48.3	62.1	70.8	82.2	100.0	119.8	139.6	-73
Acetone	C ₃ H ₆ O	-59.4	-40.5	-31.1	-20.8	-9.4	-2.0	+7.7	22.7	39.5	56.5	-94.6
Acetonitrile	C ₂ H ₃ N	-47.0	-26.6	-16.3	-5.0	+7.7	15.9	27.0	43.7	62.5	81.8	-41
Acetophenone	C ₈ H ₈ O	37.1	64.0	78.0	92.4	109.4	119.8	133.6	154.2	178.0	202.4	20.5
Acetyl chloride	C ₂ H ₃ OCℓ	-50.0	-35.0	-27.6	-19.6	-10.4	-4.5	+3.2	16.1	32.0	50.8	-112.0
Acetylene	C ₂ H ₂	-142.9	-133.0	-128.2	-122.8	-116.7	-112.8	-107.9	-100.3	-92.0	-84.0	-81.5
Acridine	C ₁₃ H ₉ N	129.4	165.8	184.0	203.5	224.2	238.7	256.0	284.0	314.3	346.0	110.5
Acrolein (2-propenal)	C ₃ H ₄ O	-64.5	-46.0	-36.7	-26.3	-15.0	-7.5	+2.5	17.5	34.5	52.5	-87.7
Acrylic acid	C ₃ H ₄ O ₂	+3.5	27.3	39.0	52.0	66.2	75.0	86.1	103.3	122.0	141.0	14
Adipic acid	C ₆ H ₁₀ O ₄	159.5	191.0	205.5	222.0	240.5	251.0	265.0	287.8	312.5	337.5	152
Allene (propadiene)	C ₃ H ₄	-120.6	-108.0	-101.0	-93.4	-85.2	-78.8	-72.5	-61.3	-48.5	-35.0	-136
Allyl alcohol (propen-1-ol-3)	C ₃ H ₆ O	-20.0	+0.2	10.5	21.7	33.4	40.3	50.0	64.5	80.2	96.6	-129
chloride (3-chloropropene)	C ₃ H ₅ Cl	-70.0	-52.0	-42.9	-32.8	-21.2	-14.1	-4.5	10.4	27.5	44.6	-136.4
isopropyl ether	C ₆ H ₁₂ O	-43.7	-23.1	-12.9	-1.8	+10.9	18.7	29.0	44.3	61.7	79.5	
isothiocyanate	C ₄ H ₃ NS	-2.0	+25.3	38.3	52.1	67.4	76.2	89.5	108.0	129.8	150.7	-80
<i>n</i> -propyl ether	C ₆ H ₁₂ O	-39.0	-18.2	-7.9	+3.7	16.4	25.0	35.8	52.6	71.4	90.5	
4-Allylveratrole	C ₁₁ H ₁₄ O ₂	85.0	113.9	127.0	142.8	158.3	169.6	183.7	204.0	226.2	248.0	
iso-Amyl acetate	C ₇ H ₁₄ O ₂	0.0	+23.7	35.2	47.8	62.1	71.0	83.2	101.3	121.5	142.0	
<i>n</i> -Amyl alcohol	C ₅ H ₁₂ O	+13.6	34.7	44.9	55.8	68.0	75.5	85.8	102.0	119.8	137.8	
iso-Amyl alcohol	C ₅ H ₁₂ O	+10.0	30.9	40.8	51.7	63.4	71.0	80.7	95.8	113.7	130.6	-117.2
<i>sec</i> -Amyl alcohol (2-pentanol)	C ₅ H ₁₂ O	+1.5	22.1	32.2	42.6	54.1	61.5	70.7	85.7	102.3	119.7	
<i>tert</i> -Amyl alcohol	C ₅ H ₁₂ O	-12.9	+7.2	17.2	27.9	38.8	46.0	55.3	69.7	85.7	101.7	-11.9
<i>sec</i> -Amylbenzene	C ₁₁ H ₁₆	29.0	55.8	69.2	83.8	100.0	110.4	124.1	145.2	168.0	193.0	
iso-Amyl benzoate	C ₁₂ H ₁₆ O ₂	72.0	104.5	121.6	139.7	158.3	171.4	186.8	210.2	235.8	262.0	
bromide (1-bromo-3-methylbutane)	C ₅ H ₁₁ Br	-20.4	+2.1	13.6	26.1	39.8	48.7	60.4	78.7	99.4	120.4	
<i>n</i> -butyrate	C ₉ H ₁₈ O ₂	21.2	47.1	59.9	74.0	90.0	99.8	113.1	133.2	155.3	178.6	
formate	C ₆ H ₁₂ O ₂	-17.5	+5.4	17.1	30.0	44.0	53.3	65.4	83.2	102.7	123.3	
iodide (1-iodo-3-methylbutane)	C ₅ H ₁₁ I	-2.5	+21.9	34.1	47.6	62.3	71.9	84.4	103.8	125.8	148.2	
isobutyrate	C ₉ H ₁₈ O ₂	14.8	40.1	52.8	66.6	81.8	91.7	104.4	124.2	146.0	168.8	
Amyl isopropionate	C ₈ H ₁₆ O ₂	+8.5	33.7	46.3	60.0	75.5	85.2	97.6	117.3	138.4	160.2	
iso-Amyl isovalerate	C ₁₀ H ₂₀ O ₂	27.0	54.4	68.6	83.8	100.6	110.3	125.1	146.1	169.5	194.0	
<i>n</i> -Amyl levulinate	C ₁₀ H ₁₈ O ₃	81.3	110.0	124.0	139.7	155.8	165.2	180.5	203.1	227.4	253.2	
iso-Amyl levulinate	C ₁₀ H ₁₈ O ₃	75.6	104.0	118.8	134.4	151.7	162.6	177.0	198.1	222.7	247.9	
nitrate	C ₅ H ₁₁ NO ₃	+5.2	28.8	40.3	53.5	67.6	76.3	88.6	106.7	126.5	147.5	
4- <i>tert</i> -Amylphenol	C ₁₁ H ₁₆ O	109.8	125.5	142.3	160.3	172.6	189.0	213.0	239.5	266.0		93
Anethole	C ₁₀ H ₁₂ O	62.6	91.6	106.0	121.8	139.3	149.8	164.2	186.1	210.5	235.3	22.5
Angelonitrile	C ₅ H ₇ N	-8.0	+15.0	28.0	41.0	55.8	65.2	77.5	96.3	117.7	140.0	
Aniline	C ₆ H ₇ N	34.8	57.9	69.4	82.0	96.7	106.0	119.9	140.1	161.9	184.4	-6.2
2-Anilinoethanol	C ₈ H ₁₁ NO	104.0	134.3	149.6	165.7	183.7	194.0	209.5	230.6	254.5	279.6	
Anisaldehyde	C ₈ H ₈ O ₂	73.2	102.6	117.8	133.5	150.5	161.7	176.7	199.0	223.0	248.0	2.5
<i>o</i> -Anisidine (2-methoxyaniline)	C ₇ H ₉ NO	61.0	88.0	101.7	116.1	132.0	142.1	155.2	175.3	197.3	218.5	5.2
Anthracene	C ₁₄ H ₁₀	145.0	173.5	187.2	201.9	217.5	231.8	250.0	279.0	310.2	342.0	217.5
Anthraquinone	C ₁₄ H ₈ O ₂	190.0	219.4	234.2	248.3	264.3	273.3	285.0	314.6	346.2	379.9	286
Azelaic acid	C ₉ H ₁₆ O ₄	178.3	210.4	225.5	242.4	260.0	271.8	286.5	309.6	332.8	356.5	106.5
Azelaldehyde	C ₉ H ₈ O	33.3	58.4	71.6	85.0	100.2	110.0	123.0	142.1	163.4	185.0	
Azobenzene	C ₁₂ H ₁₀ N ₂	103.5	135.7	151.5	168.3	187.9	199.8	216.0	240.0	266.1	293.0	68
Benzal chloride (α,α-Dichlorotoluene)	C ₇ H ₆ Cl ₂	35.4	64.0	78.7	94.3	112.1	123.4	138.3	160.7	187.0	214.0	-16.1
Benzaldehyde	C ₇ H ₆ O	26.2	50.1	62.0	75.0	90.1	99.6	112.5	131.7	154.1	179.0	-26
Benzanthrone	C ₁₇ H ₁₀ O	225.0	274.5	297.2	322.5	350.0	368.8	390.0	426.5			174
Benzene	C ₆ H ₆	-36.7	-19.6	-11.5	-2.6	+7.6	15.4	26.1	42.2	60.6	80.1	+5.5
Benzenesulfonylchloride	C ₆ H ₅ ClO ₂ S	65.9	96.5	112.0	129.0	147.7	158.2	174.5	198.0	224.0	251.5	14.5
Benzil	C ₁₄ H ₁₀ O ₂	128.4	165.2	183.0	202.8	224.5	238.2	255.8	283.5	314.3	347.0	95
Benzoic acid	C ₇ H ₆ O ₂	96.0	119.5	132.1	146.7	162.6	172.8	186.2	205.8	227.0	249.2	121.7
anhydride	C ₁₄ H ₁₀ O ₃	143.8	180.0	198.0	218.0	239.8	252.7	270.4	299.1	328.8	360.0	42
Benzoil	C ₁₄ H ₁₂ O ₂	135.6	170.2	188.1	207.0	227.6	241.7	258.0	284.4	313.5	343.0	132
Benzonitrile	C ₇ H ₅ N	28.2	55.3	69.2	83.4	99.6	109.8	123.5	144.1	166.7	190.6	-12.9
Benzophenone	C ₁₃ H ₁₀ O	108.2	141.7	157.6	175.8	195.7	208.2	224.4	249.8	276.8	305.4	48.5
Benzotrichloride (α,α,α-Trichlorotoluene)	C ₇ H ₅ Cl ₃	45.8	73.7	87.6	102.7	119.8	130.0	144.3	165.6	189.2	213.5	-21.2
Benzotrifluoride (α,α,α-Trifluorotoluene)	C ₇ H ₅ F ₃	-32.0	-10.3	-0.4	12.2	25.7	34.0	45.3	62.5	82.0	102.2	-29.3
Benzoyl bromide	C ₇ H ₅ BrO	47.0	75.4	89.8	105.4	122.6	133.4	147.7	169.2	193.7	218.5	0
chloride	C ₇ H ₅ ClO	32.1	59.1	73.0	87.6	103.8	114.7	128.0	149.5	172.8	197.2	-0.5
nitrile	C ₈ H ₅ NO	44.5	71.7	85.5	100.2	116.6	127.0	141.0	161.3	185.0	208.0	33.5
Benzyl acetate	C ₉ H ₁₀ O ₂	45.0	73.4	87.6	102.3	119.6	129.8	144.0	165.5	189.0	213.5	-51.5
alcohol	C ₇ H ₈ O	58.0	80.8	92.6	105.8	119.8	129.3	141.7	160.0	183.0	204.7	-15.3

*Compiled from the extended tables published by D. R. Stull in *Ind. Eng. Chem.*, **39**, 517 (1947). For information on fuels see Hibbard, N.A.C.A. Research Mem. E56121, 1956. For methane see Johnson (ed.), WADD-TR-60-56, 1960.

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
Benzylamine	C ₇ H ₉ N	29.0	54.8	67.7	81.8	97.3	107.3	120.0	140.0	161.3	184.5	
Benzyl bromide (α -bromotoluene)	C ₇ H ₇ Br	32.2	59.6	73.4	88.3	104.8	115.6	129.8	150.8	175.2	198.5	-4
chloride (α -chlorotoluene)	C ₇ H ₇ Cl	22.0	47.8	60.8	75.0	90.7	100.5	114.2	134.0	155.8	179.4	-39
cinnamate	C ₁₆ H ₁₃ O ₂	173.8	206.3	221.5	239.3	255.8	267.0	281.5	303.8	326.7	350.0	39
Benzylchlorosilane	C ₇ H ₈ Cl ₃ Si	45.3	70.2	83.2	96.7	111.8	121.3	133.5	152.0	173.0	194.3	
Benzyl ethyl ether	C ₉ H ₁₂ O	26.0	52.0	65.0	79.6	95.4	105.5	118.9	139.6	161.5	185.0	
phenyl ether	C ₁₃ H ₁₂ O	95.4	127.7	144.0	160.7	180.1	192.6	209.2	233.2	259.8	287.0	
isothiocyanate	C ₈ H ₇ NS	79.5	107.8	121.8	137.0	153.0	163.8	177.7	198.0	220.4	243.0	
Biphenyl	C ₁₂ H ₁₀	70.6	101.8	117.0	134.2	152.5	165.2	180.7	204.2	229.4	254.9	69.5
1-Biphenyloxy-2,3-epoxypropane	C ₁₅ H ₁₄ O ₂	135.3	169.9	187.2	205.8	226.3	239.7	255.0	280.4	309.8	340.0	
<i>d</i> -Bornyl acetate	C ₁₂ H ₂₀ O ₂	46.9	75.7	90.2	106.0	123.7	135.7	149.8	172.0	197.5	223.0	29
Bornyl <i>n</i> -butyrate	C ₁₄ H ₂₄ O ₂	74.0	103.4	118.0	133.8	150.7	161.8	176.4	198.0	222.2	247.0	
formate	C ₁₁ H ₁₈ O ₂	47.0	74.8	89.3	104.0	121.2	131.7	145.8	166.4	190.2	214.0	
isobutyrate	C ₁₄ H ₂₄ O ₂	70.0	99.8	114.0	130.0	147.2	157.6	172.2	194.2	218.2	243.0	
propionate	C ₁₃ H ₂₂ O ₂	64.6	93.7	108.0	123.7	140.4	151.2	165.7	187.5	211.2	235.0	
Brassicic acid	C ₂₂ H ₄₀ O ₂	209.6	241.7	256.0	272.9	290.0	301.5	316.2	336.8	359.6	382.5	61.5
Bromoacetic acid	C ₂ H ₃ BrO ₂	54.7	81.6	94.1	108.2	124.0	133.8	146.3	165.8	186.7	208.0	49.5
4-Bromoanisole	C ₇ H ₇ BrO	48.8	77.8	91.9	107.8	125.0	136.0	150.1	172.7	197.5	223.0	12.5
Bromobenzene	C ₆ H ₅ Br	+2.9	27.8	40.0	53.8	68.6	78.1	90.8	110.1	132.3	156.2	-30.7
4-Bromobiphenyl	C ₁₂ H ₉ Br	98.0	133.7	150.6	169.8	190.8	204.5	221.8	248.2	277.7	310.0	90.5
1-Bromo-2-butanol	C ₄ H ₉ BrO	23.7	45.4	55.8	67.2	79.5	87.0	97.6	112.1	128.3	145.0	
1-Bromo-2-butanone	C ₄ H ₇ BrO	+6.2	30.0	41.8	54.2	68.2	77.3	89.2	107.0	126.3	147.0	
<i>cis</i> -1-Bromo-1-butene	C ₄ H ₇ Br	-44.0	-23.2	-12.8	-1.4	+11.5	19.8	30.8	47.8	66.8	86.2	
<i>trans</i> -1-Bromo-1-butene	C ₄ H ₇ Br	-38.4	-17.0	-6.4	+5.4	18.4	27.2	38.1	55.7	75.0	94.7	-100.3
2-Bromo-1-butene	C ₄ H ₇ Br	-47.3	-27.0	-16.8	-5.3	+7.2	15.4	26.3	42.8	61.9	81.0	-133.4
<i>cis</i> -2-Bromo-2-butene	C ₄ H ₇ Br	-39.0	-17.9	-7.2	+4.6	17.7	26.2	37.5	54.5	74.0	93.9	-111.2
<i>trans</i> -2-Bromo-2-butene	C ₄ H ₇ Br	-45.0	-24.1	-13.8	-2.4	+10.5	18.7	29.9	46.5	66.0	85.5	-114.6
1,4-Bromochlorobenzene	C ₆ H ₄ BrCl	32.0	59.5	72.7	87.8	103.8	114.8	128.0	149.5	172.6	196.9	
1-Bromo-1-chloroethane	C ₂ H ₄ BrCl	-36.0	-18.0	-9.4	0.0	+10.4	17.0	28.0	44.7	63.4	82.7	16.6
1-Bromo-2-chloroethane	C ₂ H ₄ BrCl	-28.8	-7.0	+4.1	16.0	29.7	38.0	49.5	66.8	86.0	106.7	-16.6
2-Bromo-4,6-dichlorophenol	C ₆ H ₃ BrCl ₂ O	84.0	115.6	130.8	147.7	165.8	177.6	193.2	216.5	242.0	268.0	68
1-Bromo-4-ethyl benzene	C ₈ H ₉ Br	30.4	42.5	74.0	90.2	108.5	121.0	135.5	156.5	182.0	206.0	-45.0
(2-Bromoethyl)-benzene	C ₈ H ₉ Br	48.0	76.2	90.5	105.8	123.2	133.8	148.2	169.8	194.0	219.0	
2-Bromoethyl 2-chloroethyl ether	C ₄ H ₈ BrClO	36.5	63.2	76.3	90.8	106.6	116.4	129.8	150.0	172.3	195.8	
(2-Bromoethyl)-cyclohexane	C ₈ H ₁₅ Br	38.7	66.6	80.5	95.8	113.0	123.7	138.0	160.0	186.2	213.0	
1-Bromoethylene	C ₂ H ₃ Br	-95.4	-77.8	-68.8	-58.8	-48.1	-41.2	-31.9	-17.2	-1.1	+15.8	-138
Bromoform (tribromomethane)	CHBr ₃		22.0	34.0	48.0	63.6	73.4	85.9	106.1	127.9	150.5	8.5
1-Bromonaphthalene	C ₁₀ H ₇ Br	84.2	117.5	133.6	150.2	170.2	183.5	198.8	224.2	252.0	281.1	5.5
2-Bromo-4-phenylphenol	C ₁₂ H ₉ BrO	100.0	135.4	152.3	171.8	193.8	207.0	224.5	251.0	280.2	311.0	95
3-Bromopyridine	C ₅ H ₄ BrN	16.8	42.0	55.2	69.1	84.1	94.1	107.8	127.7	150.0	173.4	
2-Bromotoluene	C ₇ H ₇ Br	24.4	49.7	62.3	76.0	91.0	100.0	112.0	133.6	157.3	181.8	-28
3-Bromotoluene	C ₇ H ₇ Br	14.8	50.8	64.0	78.1	93.9	104.1	117.8	138.0	160.0	183.7	39.8
4-Bromotoluene	C ₇ H ₇ Br	10.3	47.5	61.1	75.2	91.8	102.3	116.4	137.4	160.2	184.5	28.5
3-Bromo-2,4,6-trichlorophenol	C ₆ H ₂ BrCl ₃ O	112.4	146.2	163.2	181.8	200.5	213.0	229.3	253.0	278.0	305.8	
2-Bromo-1,4-xylene	C ₈ H ₉ Br	37.5	65.0	78.8	94.0	110.6	121.6	135.7	156.4	181.0	206.7	+9.5
1,2-Butadiene (methyl allene)	C ₄ H ₆	-89.0	-72.7	-64.2	-54.9	-44.3	-37.5	-28.3	-14.2	+1.8	18.5	
1,3-Butadiene	C ₄ H ₆	-102.8	-87.6	-79.7	-71.0	-61.3	-55.1	-46.8	-33.9	-19.3	-4.5	-108.9
<i>n</i> -Butane	C ₄ H ₁₀	-101.5	-85.7	-77.8	-68.9	-59.1	-52.8	-44.2	-31.2	-16.3	-0.5	-135
iso-Butane (2-methylpropane)	C ₄ H ₁₀	-109.2	-94.1	-86.4	-77.9	-68.4	-62.4	-54.1	-41.5	-27.1	-11.7	-145
1,3-Butanediol	C ₄ H ₁₀ O ₂	22.2	67.5	85.3	100.0	117.4	127.5	141.2	161.0	183.8	206.5	77
1,2,3-Butanetriol	C ₄ H ₁₀ O ₃	102.0	132.0	146.0	161.0	178.0	188.0	202.5	222.0	243.5	264.0	
1-Butene	C ₄ H ₈	-104.8	-89.4	-81.6	-73.0	-63.4	-57.2	-48.9	-36.2	-21.7	-6.3	-130
<i>cis</i> -2-Butene	C ₄ H ₈	-96.4	-81.1	-73.4	-64.6	-54.7	-48.4	-39.8	-26.8	-12.0	+3.7	-138.9
<i>trans</i> -2-Butene	C ₄ H ₈	-99.4	-84.0	-76.3	-67.5	-57.6	-51.3	-42.7	-29.7	-14.8	+0.9	-105.4
3-Butenenitrile	C ₄ H ₅ N	-19.6	+2.9	14.1	26.6	40.0	48.8	60.2	78.0	98.0	119.0	
iso-Butyl acetate	C ₆ H ₁₂ O ₂	-21.2	+1.4	12.8	25.5	39.2	48.0	59.7	77.6	97.5	118.0	-98.9
<i>n</i> -Butyl acrylate	C ₈ H ₁₂ O ₂	-0.5	+23.5	35.5	48.6	63.4	72.6	85.1	104.0	125.2	147.4	-64.6
alcohol	C ₄ H ₉ O	-1.2	+20.0	30.2	41.5	53.4	60.3	70.1	84.3	100.8	117.5	-79.9
iso-Butyl alcohol	C ₄ H ₉ O	-9.0	+11.6	21.7	32.4	44.1	51.7	61.5	75.9	91.4	108.0	-108
<i>sec</i> -Butyl alcohol	C ₄ H ₉ O	-12.2	+7.2	16.9	27.3	38.1	45.2	54.1	67.9	83.9	99.5	-114.7
<i>tert</i> -Butyl alcohol	C ₄ H ₉ O	-20.4	-3.0	+5.5	14.3	24.5	31.0	39.8	52.7	68.0	82.9	25.3
iso-Butyl amine	C ₄ H ₁₁ N	-50.0	-31.0	-21.0	-10.3	+1.3	8.8	18.8	32.0	50.7	68.6	-85.0
<i>n</i> -Butylbenzene	C ₁₀ H ₁₄	22.7	48.8	62.0	76.3	92.4	102.6	116.2	136.9	159.2	183.1	-88.0
iso-Butylbenzene	C ₁₀ H ₁₄	14.1	40.5	53.7	67.8	83.3	93.3	107.0	127.2	149.6	172.8	-51.5
<i>sec</i> -Butylbenzene	C ₁₀ H ₁₄	18.6	44.2	57.0	70.6	86.2	96.0	109.5	128.8	150.3	173.5	-75.5
<i>tert</i> -Butylbenzene	C ₁₀ H ₁₄	13.0	39.0	51.7	65.6	80.8	90.6	103.8	123.7	145.8	168.5	-58
iso-Butyl benzoate	C ₁₁ H ₁₄ O ₂	64.0	93.6	108.6	124.2	141.8	152.0	166.4	188.2	212.8	237.0	
<i>n</i> -Butyl bromide (1-bromobutane)	C ₄ H ₉ Br	-33.0	-11.2	-0.3	+11.6	24.8	33.4	44.7	62.0	81.7	101.6	-112.4
iso-Butyl <i>n</i> -butyrate	C ₈ H ₁₆ O ₂	+4.6	30.0	42.2	56.1	71.7	81.3	94.0	113.9	135.7	156.9	
carbamate	C ₅ H ₁₁ NO ₂		83.7	96.4	110.1	125.3	134.6	147.2	165.7	186.0	206.5	65
Butyl carbitol (diethylene glycol butyl ether)	C ₈ H ₁₈ O ₃	70.0	95.7	107.8	120.5	135.5	146.0	159.8	181.2	205.0	231.2	
<i>n</i> -Butyl chloride (1-chlorobutane)	C ₄ H ₉ Cl	-49.0	-28.9	-18.6	-7.4	+5.0	13.0	24.0	40.0	58.8	77.8	-123.1
iso-Butyl chloride	C ₄ H ₉ Cl	-53.8	-34.3	-24.5	-13.8	-1.9	+5.9	16.0	32.0	50.0	68.9	-131.2

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
<i>sec</i> -Butyl chloride (2-Chlorobutane)	C ₄ H ₉ Cl	-60.2	-39.8	-29.2	-17.7	-5.0	+3.4	14.2	31.5	50.0	68.0	-131.3
<i>tert</i> -Butyl chloride	C ₄ H ₉ Cl					-19.0	-11.4	-1.0	+14.6	32.6	51.0	-26.5
<i>sec</i> -Butyl chloroacetate	C ₆ H ₁₁ ClO ₂	17.0	41.8	54.6	68.2	83.6	93.0	105.5	124.1	146.0	167.8	
2- <i>tert</i> -Butyl-4-cresol	C ₁₁ H ₁₆ O	70.0	98.0	112.0	127.2	143.9	153.7	167.0	187.8	210.0	232.6	
4- <i>tert</i> -Butyl-2-cresol	C ₁₁ H ₁₆ O	74.3	103.7	118.0	134.0	150.8	161.7	176.2	197.8	221.8	247.0	
iso-Butyl dichloroacetate	C ₆ H ₁₀ Cl ₂ O ₂	28.6	54.3	67.5	81.4	96.7	106.6	119.8	139.2	160.0	183.0	
2,3-Butylene glycol (2,3-butanediol)	C ₄ H ₁₀ O ₂	44.0	68.4	80.3	93.4	107.8	116.3	127.8	145.6	164.0	182.0	22.5
2-Butyl-2-ethylbutane-1,3-diol	C ₁₀ H ₂₂ O ₂	94.1	122.6	136.8	151.2	167.8	178.0	191.9	212.0	233.5	255.0	
2- <i>tert</i> -Butyl-4-ethylphenol	C ₁₂ H ₁₈ O	76.3	106.2	121.0	137.0	154.0	165.4	179.0	200.3	223.8	247.8	
<i>n</i> -Butyl formate	C ₅ H ₁₀ O ₂	-26.4	-4.7	+6.1	18.0	31.6	39.8	51.0	67.9	86.2	106.0	
iso-Butyl formate	C ₅ H ₁₀ O ₂	-32.7	-11.4	-0.8	+11.0	24.1	32.4	43.4	60.0	79.0	98.2	-95.3
<i>sec</i> -Butyl formate	C ₅ H ₁₀ O ₂	-34.4	-13.3	-3.1	+8.4	21.3	29.6	40.2	56.8	75.2	93.6	
<i>sec</i> -Butyl glycolate	C ₆ H ₁₂ O ₃	28.3	53.6	66.0	79.8	94.2	104.0	116.4	135.5	155.6	177.5	
iso-Butyl iodide (1-iodo-2-methylpropane)	C ₄ H ₉ I	-17.0	+5.8	17.0	29.8	42.8	51.8	63.5	81.0	100.3	120.4	-90.7
isobutyrate	C ₅ H ₁₀ O ₂	+4.1	28.0	39.9	52.4	67.2	75.9	88.0	106.3	126.3	147.5	-80.7
isovalerate	C ₆ H ₁₂ O ₂	16.0	41.2	53.8	67.7	82.7	92.4	105.2	124.8	146.4	168.7	
levulinate	C ₆ H ₁₀ O ₃	65.0	92.1	105.9	120.2	136.2	147.0	160.2	181.8	205.5	229.9	
naphthylketone (1-isovaleronaphthone)	C ₁₅ H ₁₆ O	136.0	167.9	184.0	201.6	219.7	231.5	246.7	269.7	294.0	320.0	
2- <i>sec</i> -Butylphenol	C ₁₀ H ₁₄ O	57.4	86.0	100.8	116.1	133.4	143.9	157.3	179.7	203.8	228.0	
2- <i>tert</i> -Butylphenol	C ₁₀ H ₁₄ O	56.6	84.2	98.1	113.0	129.2	140.0	153.5	173.8	196.3	219.5	
4-iso-Butylphenol	C ₁₀ H ₁₄ O	72.1	100.9	115.5	130.3	147.2	157.0	171.2	192.1	214.7	237.0	
4- <i>sec</i> -Butylphenol	C ₁₀ H ₁₄ O	71.4	100.5	114.8	130.3	147.8	157.9	172.4	194.3	217.6	242.1	
4- <i>tert</i> -Butylphenol	C ₁₀ H ₁₄ O	70.0	99.2	114.0	129.5	146.0	156.0	170.2	191.5	214.0	238.0	99
2-(4- <i>tert</i> -Butylphenoxy)ethyl acetate	C ₁₄ H ₂₀ O ₃	118.0	150.0	165.8	183.3	201.5	212.8	228.0	250.3	277.6	304.4	
4- <i>tert</i> -Butylphenyl dichlorophosphate	C ₁₀ H ₁₃ Cl ₂ O ₂ P	96.0	129.6	146.0	164.0	184.3	197.2	214.3	240.0	268.2	299.0	
<i>tert</i> -Butyl phenyl ketone (pivalophenone)	C ₁₁ H ₁₄ O	57.8	85.7	99.0	114.3	130.4	140.8	154.0	175.0	197.7	220.0	
iso-Butyl propionate	C ₇ H ₁₄ O ₂	-2.3	+20.9	32.3	44.8	58.5	67.6	79.5	97.0	116.4	136.8	-71
4- <i>tert</i> -Butyl-2,5-xyleneol	C ₁₂ H ₁₈ O	88.2	119.8	135.0	151.0	169.8	180.3	195.0	217.5	241.3	265.3	
4- <i>tert</i> -Butyl-2,6-xyleneol	C ₁₂ H ₁₈ O	74.0	103.9	119.0	135.0	152.2	163.6	176.0	196.0	217.8	239.8	
6- <i>tert</i> -Butyl-2,4-xyleneol	C ₁₂ H ₁₈ O	70.3	100.2	115.0	131.0	148.5	158.2	172.0	192.3	214.2	236.5	
6- <i>tert</i> -Butyl-3,4-xyleneol	C ₁₂ H ₁₈ O	83.9	113.6	127.0	143.0	159.7	170.0	184.0	204.5	226.7	249.5	
Butyric acid	C ₄ H ₈ O ₂	25.5	49.8	61.5	74.0	88.0	96.5	108.0	125.5	144.5	163.5	-74
iso-Butyric acid	C ₄ H ₈ O ₂	14.7	39.3	51.2	64.0	77.8	86.3	98.0	115.8	134.5	154.5	-47
Butyronitrile	C ₄ H ₇ N	-20.0	+2.1	13.4	25.7	38.4	47.3	59.0	76.7	96.8	117.5	
iso-Valerophenone	C ₁₁ H ₁₄ O	58.3	87.0	101.4	116.8	133.8	144.6	158.0	180.1	204.2	228.0	
Camphene	C ₁₀ H ₁₆			47.2	60.4	75.7	85.0	97.9	117.5	138.7	160.5	50
Campholenic acid	C ₁₀ H ₁₆ O ₂	97.6	125.7	139.8	153.9	170.0	180.0	193.7	212.7	234.0	256.0	
<i>d</i> -Camphor	C ₁₀ H ₁₆ O	41.5	68.6	82.3	97.5	114.0	124.0	138.0	157.9	182.0	209.2	178.5
Camphylamine	C ₁₀ H ₁₉ N	45.3	74.0	83.7	97.6	112.5	122.0	134.6	153.0	173.8	195.0	
Capraldehyde	C ₁₀ H ₂₀ O	51.9	78.8	92.0	106.3	122.2	132.0	145.3	164.8	186.3	208.5	
Capric acid	C ₁₀ H ₂₀ O ₂	125.0	142.0	152.2	165.0	179.9	189.8	200.0	217.1	240.3	268.4	31.5
<i>n</i> -Caproic acid	C ₆ H ₁₂ O ₂	71.4	89.5	99.5	111.8	125.0	133.3	144.0	160.8	181.0	202.0	-1.5
iso-Caproic acid	C ₆ H ₁₂ O ₂	66.2	83.0	94.0	107.0	120.4	129.6	141.4	158.3	181.0	207.7	-35
iso-Caprolactone	C ₆ H ₁₀ O ₂	38.3	66.4	80.3	95.7	112.3	123.2	137.2	157.8	182.1	207.0	
Capronitrile	C ₆ H ₁₁ N	9.2	34.6	47.5	61.7	76.9	86.8	99.8	119.7	141.0	163.7	
Capryl alcohol (2-octanol)	C ₈ H ₁₈ O	32.8	57.6	70.0	83.3	98.0	107.4	119.8	138.0	157.5	178.5	-38.6
Caprylaldehyde	C ₈ H ₁₆ O	73.4	92.0	101.2	110.2	120.0	126.0	133.9	145.4	156.5	168.5	
Caprylic acid (octanoic acid)	C ₈ H ₁₆ O ₂	92.3	114.1	124.0	136.4	150.6	160.0	172.2	190.3	213.9	237.5	16
Caprylonitrile	C ₈ H ₁₅ N	43.0	67.6	80.4	94.6	110.6	121.2	134.8	155.2	179.5	204.5	
Carbazole	C ₁₂ H ₉ N						248.2	265.0	292.5	323.0	354.8	244.8
Carbon dioxide	CO ₂	-134.3	-124.4	-119.5	-114.4	-108.6	-104.8	-100.2	-93.0	-85.7	-78.2	-57.5
disulfide	CS ₂	-73.8	-54.3	-44.7	-34.3	-22.5	-15.3	-5.1	+10.4	28.0	46.5	-110.8
monoxide	CO	-222.0	-217.2	-215.0	-212.8	-210.0	-208.1	-205.7	-201.3	-196.3	-191.3	-205.0
oxyselenide (carbonyl selenide)	COSe	-117.1	-102.3	-95.0	-86.3	-76.4	-70.2	-61.7	-49.8	-35.6	-21.9	
oxysulfide (carbonyl sulfide)	COS	-132.4	-119.8	-113.3	-106.0	-98.3	-93.0	-85.9	-75.0	-62.7	-49.9	-138.8
tetrabromide	CBr ₄					96.3	106.3	119.7	139.7	163.5	189.5	90.1
tetrachloride	CCl ₄	-50.0	-30.0	-19.6	-8.2	+4.3	12.3	23.0	38.3	57.8	76.7	-22.6
tetrafluoride	CF ₄	-184.6	-174.1	-169.3	-164.3	-158.8	-155.4	-150.7	-143.6	-135.5	-127.7	-183.7
Carvacrol	C ₁₀ H ₁₄ O	70.0	98.4	113.2	127.9	145.2	155.3	169.7	191.2	213.8	237.0	+0.5
Carvone	C ₁₀ H ₁₄ O	57.4	86.1	100.4	116.1	133.0	143.8	157.3	179.6	203.5	227.5	
Chavibetol	C ₁₀ H ₁₂ O ₂	83.6	113.3	127.0	143.2	159.8	170.7	185.5	206.8	229.8	254.0	
Chloral (trichloroacetaldehyde)	C ₂ HCl ₃ O	-37.8	-16.0	-5.0	+7.2	20.2	29.1	40.2	57.8	77.5	97.7	-57
hydrate (trichloroacetaldehyde hydrate)	C ₂ H ₃ Cl ₃ O ₂	-9.8	+10.0	19.5	29.2	39.7	46.2	55.0	68.0	82.1	96.2	51.7
Chloranil	C ₆ Cl ₄ O ₂	70.7	89.3	97.8	106.4	116.1	122.0	129.5	140.3	151.3	162.6	290
Chloroacetic acid	C ₂ H ₃ ClO ₂	43.0	68.3	81.0	94.2	109.2	118.3	130.7	149.0	169.0	189.5	61.2
anhydride	C ₄ H ₄ Cl ₂ O ₃	67.2	94.1	108.0	122.4	138.2	148.0	159.8	177.8	197.0	217.0	46
2-Chloroaniline	C ₆ H ₆ ClN	46.3	72.3	84.8	99.2	115.6	125.7	139.5	160.0	183.7	208.8	0
3-Chloroaniline	C ₆ H ₆ ClN	63.5	89.8	102.0	116.7	133.6	144.1	158.0	179.5	203.5	228.5	-10.4
4-Chloroaniline	C ₆ H ₆ ClN	59.3	87.9	102.1	117.8	135.0	145.8	159.9	182.3	206.6	230.5	70.5
Chlorobenzene	C ₆ H ₅ Cl	-13.0	+10.6	22.2	35.3	49.7	58.3	70.7	89.4	110.0	132.2	-45.2
2-Chlorobenzotrichloride (2- α,α,α -tetrachlorotoluene)	C ₇ H ₃ Cl ₄	69.0	101.8	117.9	135.8	155.0	167.8	185.0	208.0	233.0	262.1	28.7

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
2-Chlorobenzotrifluoride (2-chloro- α,α,α -trifluorotoluene)	C ₇ H ₄ ClF ₃	0.0	24.7	37.1	50.6	65.9	75.4	88.3	108.3	130.0	152.2	-6.0
2-Chlorobiphenyl	C ₁₂ H ₉ Cl	89.3	109.8	134.7	151.2	169.9	182.1	197.0	219.6	243.8	267.5	34
4-Chlorobiphenyl	C ₁₂ H ₉ Cl	96.4	129.8	146.0	164.0	183.8	196.0	212.5	237.8	264.5	292.9	75.5
α -Chlorocrotonic acid	C ₄ H ₅ ClO ₂	70.0	95.6	108.0	121.2	135.6	144.4	155.9	173.8	193.2	212.0	
Chlorodifluoromethane	CHClF ₂	-122.8	-110.2	-103.7	-96.5	-88.6	-83.4	-76.4	-65.8	-53.6	-40.8	-160
Chlorodimethylphenylsilane	C ₈ H ₁₁ ClSi	29.8	56.7	70.0	84.7	101.2	111.5	124.7	145.5	168.6	193.5	
1-Chloro-2-ethoxybenzene	C ₈ H ₉ ClO	45.8	72.8	86.5	101.5	117.8	127.8	141.8	162.0	185.5	208.0	
2-(2-Chloroethoxy) ethanol	C ₄ H ₉ ClO ₂	53.0	78.3	90.7	104.1	118.4	127.5	139.5	157.2	176.5	196.0	
bis-2-Chloroethyl acetacetal	C ₆ H ₁₂ Cl ₂ O ₂	56.2	83.7	97.6	112.2	127.8	138.0	150.7	169.8	190.5	212.6	
1-Chloro-2-ethylbenzene	C ₈ H ₉ Cl	17.2	43.0	56.1	70.3	86.2	96.4	110.0	130.2	152.2	177.6	-80.2
1-Chloro-3-ethylbenzene	C ₈ H ₉ Cl	18.6	45.2	58.1	73.0	89.2	99.6	113.6	133.8	156.7	181.1	-53.3
1-Chloro-4-ethylbenzene	C ₈ H ₉ Cl	19.2	46.4	60.0	75.5	91.8	102.0	116.0	137.0	159.8	184.3	-62.6
2-Chloroethyl chloroacetate	C ₄ H ₆ Cl ₂ O ₂	46.0	72.1	86.0	100.0	116.0	126.2	140.0	159.8	182.2	205.0	
2-Chloroethyl 2-chloroisopropyl ether	C ₅ H ₁₀ Cl ₂ O	24.7	50.1	63.0	77.2	92.4	102.2	115.8	135.7	156.5	180.0	
2-Chloroethyl 2-chloropropyl ether	C ₅ H ₁₀ Cl ₂ O	29.8	56.5	70.0	84.8	101.5	111.8	125.6	146.3	169.8	194.1	
2-Chloroethyl α -methylbenzyl ether	C ₁₀ H ₁₃ ClO	62.3	91.4	106.0	121.8	139.6	150.0	164.8	186.3	210.8	235.0	
Chloroform (trichloromethane)	CHCl ₃	-58.0	-39.1	-29.7	-19.0	-7.1	+0.5	10.4	25.9	42.7	61.3	-63.5
1-Chloronaphthalene	C ₁₀ H ₇ Cl	80.6	104.8	118.6	134.4	153.2	165.6	180.4	204.2	230.8	259.3	-20
4-Chlorophenethyl alcohol	C ₈ H ₉ ClO	84.0	114.3	129.0	145.0	162.0	173.5	188.1	210.0	234.5	259.3	
2-Chlorophenol	C ₆ H ₅ ClO	12.1	38.2	51.2	65.9	82.0	92.0	106.0	126.4	149.8	174.5	7
3-Chlorophenol	C ₆ H ₅ ClO	44.2	72.0	86.1	101.7	118.0	129.4	143.0	164.8	188.7	214.0	32.5
4-Chlorophenol	C ₆ H ₅ ClO	49.8	78.2	92.2	108.1	125.0	136.1	150.0	172.0	196.0	220.0	42
2-Chloro-3-phenylphenol	C ₁₂ H ₉ ClO	118.0	152.2	169.7	186.7	207.4	219.6	237.0	261.3	289.4	317.5	+6
2-Chloro-6-phenylphenol	C ₁₂ H ₉ ClO	119.8	153.7	170.7	189.8	208.2	220.0	237.1	261.6	289.5	317.0	
Chloropropicrin (trichloronitromethane)	CCl ₃ NO ₂	-25.5	-3.3	+7.8	20.0	33.8	42.3	53.8	71.8	91.8	111.9	-64
1-Chloropropene	C ₃ H ₅ Cl	-81.3	-63.4	-54.1	-44.0	-32.7	-25.1	-15.1	+1.3	18.0	37.0	-99.0
2-Chloropyridine	C ₅ H ₄ ClN	13.3	38.8	51.7	65.8	81.7	91.6	104.6	125.0	147.7	170.2	
3-Chlorostyrene	C ₈ H ₇ Cl	25.3	51.3	65.2	80.0	96.5	107.2	121.2	142.2	165.7	190.0	
4-Chlorostyrene	C ₈ H ₇ Cl	28.0	54.5	67.5	82.0	98.0	108.5	122.0	143.5	166.0	191.0	-15.0
1-Chlorotetradecane	C ₁₄ H ₂₉ Cl	98.5	131.8	148.2	166.2	187.0	199.8	215.5	240.3	267.5	296.0	+0.9
2-Chlorotoluene	C ₇ H ₇ Cl	+5.4	30.6	43.2	56.9	72.0	81.8	94.7	115.0	137.1	159.3	
3-Chlorotoluene	C ₇ H ₇ Cl	+4.8	30.3	43.2	57.4	73.0	83.2	96.3	116.6	139.7	162.3	
4-Chlorotoluene	C ₇ H ₇ Cl	+5.5	31.0	43.8	57.8	73.5	83.3	96.6	117.1	139.8	162.3	+7.3
Chlorotriethylsilane	C ₆ H ₁₅ ClSi	-4.9	+19.8	32.0	45.5	60.2	69.5	82.3	101.6	123.6	146.3	
1-Chloro-1,2,2-trifluoroethylene	C ₂ ClF ₃	-116.0	-102.5	-95.9	-88.2	-79.7	-74.1	-66.7	-55.0	-41.7	-27.9	-157.5
Chlorotrifluoromethane	CClF ₃	-149.5	-139.2	-134.1	-128.5	-121.9	-117.3	-111.7	-102.5	-92.7	-81.2	
Chlorotrimethylsilane	C ₃ H ₉ ClSi	-62.8	-43.6	-34.0	-23.2	-11.4	-4.0	+6.0	21.9	39.4	57.9	
<i>trans</i> -Cinnamic acid	C ₉ H ₈ O ₂	127.5	157.8	173.0	189.5	207.1	217.8	232.4	253.3	276.7	300.0	133
Cinnamyl alcohol	C ₉ H ₁₀ O	72.6	102.5	117.8	133.7	151.0	162.0	177.8	199.8	224.6	250.0	33
Cinnamylaldehyde	C ₉ H ₈ O	76.1	105.8	120.0	135.7	152.2	163.7	177.7	199.3	222.4	246.0	-7.5
Citraconic anhydride	C ₈ H ₄ O ₃	47.1	74.8	88.9	103.8	120.3	131.3	145.4	165.8	189.8	213.5	
<i>cis</i> - α -Citral	C ₁₀ H ₁₆ O	61.7	90.0	103.9	119.4	135.9	146.3	160.0	181.8	205.0	228.0	
<i>d</i> -Citronellal	C ₁₀ H ₁₈ O	44.0	71.4	84.8	99.8	116.1	126.2	140.1	160.0	183.8	206.5	
Citronellic acid	C ₁₀ H ₁₈ O ₂	99.5	127.3	141.4	155.6	171.9	182.1	195.4	214.5	236.6	257.0	
Citronellol	C ₁₀ H ₂₀ O	66.4	93.6	107.0	121.5	137.2	147.2	159.8	179.8	201.0	221.5	
Citronellyl acetate	C ₁₂ H ₂₂ O ₂	74.7	100.2	113.0	126.0	140.5	149.7	161.0	178.8	197.8	217.0	
Coumarin	C ₉ H ₆ O ₂	106.0	137.8	153.4	170.0	189.0	200.5	216.5	240.0	264.7	291.0	70
<i>o</i> -Cresol (2-cresol; 2-methylphenol)	C ₇ H ₈ O	38.2	64.0	76.7	90.5	105.8	115.5	127.4	146.7	168.4	190.8	30.8
<i>m</i> -Cresol (3-cresol; 3-methylphenol)	C ₇ H ₈ O	52.0	76.0	87.8	101.4	116.0	125.8	138.0	157.3	179.0	202.8	10.9
<i>p</i> -Cresol (4-cresol; 4-methylphenol)	C ₇ H ₈ O	53.0	76.5	88.6	102.3	117.7	127.0	140.0	157.3	179.4	201.8	35.5
<i>cis</i> -Crotonic acid	C ₄ H ₆ O ₂	33.5	57.4	69.0	82.0	96.0	104.5	116.3	133.9	152.2	171.9	15.5
<i>trans</i> -Crotonic acid	C ₄ H ₆ O ₂			80.0	93.0	107.8	116.7	128.0	146.0	165.5	185.0	72
<i>cis</i> -Crotononitrile	C ₄ H ₅ N	-29.0	-7.1	+4.0	16.4	30.0	38.5	50.1	68.0	88.0	108.0	
<i>trans</i> -Crotononitrile	C ₄ H ₅ N	-19.5	+3.5	15.0	27.8	41.8	50.9	62.8	81.1	101.5	122.8	
Cumene	C ₉ H ₁₂	+2.9	26.8	38.3	51.5	66.1	75.4	88.1	107.3	129.2	152.4	-96.0
4-Cumidene	C ₉ H ₁₃ N	60.0	88.2	102.2	117.8	134.2	145.0	158.0	180.0	203.2	227.0	
Cuminal	C ₁₀ H ₁₂ O	58.0	87.3	102.0	117.9	135.2	146.0	160.0	182.8	206.7	232.0	
Cuminyol alcohol	C ₁₀ H ₁₄ O	74.2	103.7	118.0	133.8	150.3	161.7	176.2	197.9	221.7	246.6	
2-Cyano-2- <i>n</i> -butyl acetate	C ₇ H ₁₁ NO ₂	42.0	68.7	82.0	96.2	111.8	121.5	133.8	152.2	173.4	195.2	
Cyanogen	C ₂ N ₂	-95.8	-83.2	-76.8	-70.1	-62.7	-57.9	-51.8	-42.6	-33.0	-21.0	-34.4
bromide	CBrN	-35.7	-18.3	-10.0	-1.0	+8.6	14.7	22.6	33.8	46.0	61.5	58
chloride	CClN	-76.7	-61.4	-53.8	-46.1	-37.5	-32.1	-24.9	-14.1	-2.3	+13.1	-6.5
iodide	CIN	25.2	47.2	57.7	68.6	80.3	88.0	97.6	111.5	126.1	141.1	
Cyclobutane	C ₄ H ₈	-92.0	-76.0	-67.9	-58.7	-48.4	-41.8	-32.8	-18.9	-3.4	+12.9	-50
Cyclobutene	C ₄ H ₆	-99.1	-83.4	-75.4	-66.6	-56.4	-50.0	-41.2	-27.8	-12.2	+2.4	
Cyclohexane	C ₆ H ₁₂	-45.3	-25.4	-15.9	-5.0	+6.7	14.7	25.5	42.0	60.8	80.7	+6.6
Cyclohexaneethanol	C ₈ H ₁₆ O	50.4	77.2	90.0	104.0	119.8	129.8	142.7	161.7	183.5	205.4	
Cyclohexanol	C ₆ H ₁₂ O	21.0	44.0	56.0	68.8	83.0	91.8	103.7	121.7	141.4	161.0	23.9
Cyclohexanone	C ₆ H ₁₀ O	+1.4	26.4	38.7	52.5	67.8	77.5	90.4	110.3	132.5	155.6	-45.0
2-Cyclohexyl-4,6-dinitrophenol	C ₁₂ H ₁₁ N ₂ O ₅	132.8	161.8	175.9	191.2	206.7	216.0	229.0	248.7	269.8	291.5	
Cyclopentane	C ₅ H ₁₀	-68.0	-49.6	-40.4	-30.1	-18.6	-11.3	-1.3	+13.8	31.0	49.3	-93.7
Cyclopropane	C ₃ H ₆	-116.8	-104.2	-97.5	-90.3	-82.3	-77.0	-70.0	-59.1	-46.9	-33.5	-126.6
Cymene	C ₁₀ H ₁₄	17.3	43.9	57.0	71.1	87.0	97.2	110.8	131.4	153.5	177.2	-68.2

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
<i>cis</i> -Decalin	C ₁₀ H ₁₈	22.5	50.1	64.2	79.8	97.2	108.0	123.2	145.4	169.9	194.6	-43.3
<i>trans</i> -Decalin	C ₁₀ H ₁₈	-0.8	+30.6	47.2	65.3	85.7	98.4	114.6	136.2	160.1	186.7	-30.7
Decane	C ₁₀ H ₂₂	16.5	42.3	55.7	69.8	85.5	95.5	108.6	128.4	150.6	174.1	-29.7
Decan-2-one	C ₁₀ H ₂₀ O	44.2	71.9	85.8	100.7	117.1	127.8	142.0	163.2	186.7	211.0	+3.5
1-Decene	C ₁₀ H ₂₀	14.7	40.3	53.7	67.8	83.3	93.5	106.5	126.7	149.2	172.0	
Decyl alcohol	C ₁₀ H ₂₂ O	69.5	97.3	111.3	125.8	142.1	152.0	165.8	186.2	208.8	231.0	+7
Decyltrimethylsilane	C ₁₃ H ₃₀ Si	67.4	96.4	111.0	126.5	144.0	154.3	169.5	191.0	215.5	240.0	
Dehydroacetic acid	C ₈ H ₈ O ₄	91.7	122.0	137.3	153.0	171.0	181.5	197.5	219.5	244.5	269.0	
Desoxybenzoin	C ₁₄ H ₁₂ O	123.3	156.2	173.5	192.0	212.0	224.5	241.3	265.2	293.0	321.0	60
Diacetamide	C ₄ H ₇ NO ₂	70.0	95.0	108.0	122.6	138.2	148.0	160.6	180.8	202.0	223.0	78.5
Diacetylene (1,3-butadiyne)	C ₄ H ₂	-82.5	-68.0	-61.2	-53.8	-45.9	-41.0	-34.0	-20.9	-6.1	+9.7	-34.9
Diallyldichlorosilane	C ₆ H ₁₀ Cl ₂ Si	+9.5	34.8	47.4	61.3	76.4	86.3	99.7	119.4	142.0	165.3	
Diallyl sulfide	C ₆ H ₁₀ S	-9.5	+14.4	26.6	39.7	54.2	63.7	75.8	94.8	116.1	138.6	-83
Diisooamyl ether	C ₁₀ H ₂₂ O	18.6	44.3	57.0	70.7	86.3	96.0	109.6	129.0	150.3	173.4	
oxalate	C ₁₂ H ₂₂ O ₄	85.4	116.0	131.4	147.7	165.7	177.0	192.2	215.0	240.0	265.0	
sulfide	C ₁₀ H ₂₂ S	43.0	73.0	87.6	102.7	120.0	130.6	145.3	166.4	191.0	216.0	
Dibenzylamine	C ₁₄ H ₁₅ N	118.3	149.8	165.6	182.2	200.2	212.2	227.3	249.8	274.3	300.0	-26
Dibenzyl ketone (1,3-diphenyl-2-propanone)	C ₁₅ H ₁₄ O	125.5	159.8	177.6	195.7	216.6	229.4	246.6	272.3	301.7	330.5	34.5
1,4-Dibromobenzene	C ₆ H ₄ Br ₂	61.0	79.3	87.7	103.6	120.8	131.6	146.5	168.5	192.5	218.6	87.5
1,2-Dibromobutane	C ₄ H ₈ Br ₂	7.5	33.2	46.1	60.0	76.0	86.0	99.8	120.2	143.5	166.3	-64.5
<i>dl</i> -2,3-Dibromobutane	C ₄ H ₈ Br ₂	+5.0	30.0	41.6	56.4	72.0	82.0	95.3	115.7	138.0	160.5	
<i>meso</i> -2,3-Dibromobutane	C ₄ H ₈ Br ₂	+1.5	26.6	39.3	53.2	68.0	78.0	91.7	111.8	134.2	157.3	-34.5
1,2-Dibromodecane	C ₁₀ H ₂₀ Br ₂	95.7	123.6	137.3	151.0	167.4	177.5	190.2	209.6	229.8	250.4	
Di(2-bromoethyl) ether	C ₄ H ₈ Br ₂ O	47.7	75.3	88.5	103.6	119.8	130.0	144.0	165.0	188.0	212.5	
α,β-Dibromomaleic anhydride	C ₄ H ₂ Br ₂ O ₃	50.0	78.0	92.0	106.7	123.5	133.8	147.7	168.0	192.0	215.0	
1,2-Dibromo-2-methylpropane	C ₄ H ₈ Br ₂	-28.8	-3.0	+10.5	25.7	42.3	53.7	68.8	92.1	119.8	149.0	-70.3
1,3-Dibromo-2-methylpropane	C ₄ H ₈ Br ₂	14.0	40.0	53.0	67.5	83.5	93.7	107.4	117.8	150.6	174.6	
1,2-Dibromopentane	C ₅ H ₁₀ Br ₂	19.8	45.4	58.0	72.0	87.4	97.4	110.1	130.2	151.8	175.0	
1,2-Dibromopropane	C ₃ H ₆ Br ₂	-7.0	+17.3	29.4	42.3	57.2	66.4	78.7	97.8	118.5	141.6	-55.5
1,3-Dibromopropane	C ₃ H ₆ Br ₂	+9.7	35.4	48.0	62.1	77.8	87.8	101.3	121.7	144.1	167.5	-34.4
2,3-Dibromopropene	C ₃ H ₄ Br ₂	-6.0	+17.9	30.0	43.2	57.8	67.0	79.5	98.0	119.5	141.2	
2,3-Dibromo-1-propanol	C ₃ H ₆ Br ₂ O	57.0	84.5	98.2	113.5	129.8	140.0	153.0	173.8	196.0	219.0	
Diisobutylamine	C ₈ H ₁₉ N	-5.1	+18.4	30.6	43.7	57.8	67.0	79.2	97.6	118.0	139.5	-70
2,6-Ditert-butyl-4-cresol	C ₁₅ H ₂₄ O	85.8	116.2	131.0	147.0	164.1	175.2	190.0	212.8	237.6	262.5	
4,6-Ditert-butyl-2-cresol	C ₁₅ H ₂₄ O	86.2	117.3	132.4	149.0	167.4	179.0	194.0	217.5	243.4	269.3	
4,6-Ditert-butyl-3-cresol	C ₁₅ H ₂₄ O	103.7	135.2	150.0	167.0	185.3	196.1	211.0	233.0	257.1	282.0	
2,6-Ditert-butyl-4-ethylphenol	C ₁₆ H ₂₆ O	89.1	121.4	137.0	154.0	172.1	183.9	198.0	220.0	244.0	268.6	
4,6-Ditert-butyl-3-ethylphenol	C ₁₆ H ₂₆ O	111.5	142.6	157.4	174.0	192.3	204.4	218.0	241.7	264.6	290.0	
Diisobutyl oxalate	C ₁₀ H ₁₈ O ₄	63.2	91.2	105.3	120.3	137.5	147.8	161.8	183.5	205.8	229.5	
2,4-Ditert-butylphenol	C ₁₄ H ₂₂ O	84.5	115.4	130.0	146.0	164.3	175.8	190.0	212.5	237.0	260.8	
Dibutyl phthalate	C ₁₆ H ₂₂ O ₄	148.2	182.1	198.2	216.2	235.8	247.8	263.7	287.0	313.5	340.0	
sulfide	C ₈ H ₁₈ S	+21.7	51.8	66.4	80.5	96.0	105.8	118.6	138.0	159.0	182.0	-79.7
Diisobutyl <i>d</i> -tartrate	C ₁₂ H ₂₂ O ₆	117.8	151.8	169.0	188.0	208.5	221.6	239.5	264.7	294.0	324.0	73.5
Dicarvacryl-mono-(6-chloro-2-xenyl) phosphate	C ₃₂ H ₃₄ ClO ₄ P	204.2	234.5	249.3	264.5	280.5	290.7	304.9	323.8	342.0	361.0	
Dicarvacryl-2-tolyl phosphate	C ₂₇ H ₃₃ O ₄ P	180.2	209.3	221.8	237.0	251.5	260.3	272.5	290.0	309.8	330.0	
Dichloroacetic acid	C ₂ H ₂ Cl ₂ O ₂	44.0	69.8	82.6	96.3	111.8	121.5	134.0	152.3	173.7	194.4	9.7
1,2-Dichlorobenzene	C ₆ H ₄ Cl ₂	20.0	46.0	59.1	73.4	89.4	99.5	112.9	133.4	155.8	179.0	-17.6
1,3-Dichlorobenzene	C ₆ H ₄ Cl ₂	12.1	39.0	52.0	66.2	82.0	92.2	105.0	125.9	149.0	173.0	-24.2
1,4-Dichlorobenzene	C ₆ H ₄ Cl ₂			54.8	69.2	84.8	95.2	108.4	128.3	150.2	173.9	53.0
1,2-Dichlorobutane	C ₄ H ₈ Cl ₂	-23.6	-0.3	+11.5	24.5	37.7	47.8	60.2	79.7	100.8	123.5	
2,3-Dichlorobutane	C ₄ H ₈ Cl ₂	-25.2	-3.0	+8.5	21.2	35.0	43.9	56.0	74.0	94.2	116.0	-80.4
1,2-Dichloro-1,2-difluoroethylene	C ₂ Cl ₂ F ₂	-82.0	-65.6	-57.3	-48.3	-38.2	-31.8	-23.0	-10.0	+5.0	20.9	-112
Dichlorodifluoromethane	CCl ₂ F ₂	-118.5	-104.6	-97.8	-90.1	-81.6	-76.1	-68.6	-57.0	-43.9	-29.8	
Dichlorodiphenyl silane	C ₁₂ H ₁₀ Cl ₂ Si	109.6	142.4	158.0	176.0	195.5	207.5	223.8	248.0	275.5	304.0	
Dichlorodisopropyl ether	C ₆ H ₁₂ Cl ₂ O	29.6	55.2	68.2	82.2	97.3	106.9	119.7	139.0	159.8	182.7	
Di(2-chloroethoxy) methane	C ₆ H ₁₀ Cl ₂ O ₂	53.0	80.4	94.0	109.5	125.5	135.8	149.6	170.0	192.0	215.0	
Dichloroethoxymethylsilane	C ₈ H ₈ Cl ₂ OSi	-33.8	-12.1	-1.3	+11.3	24.4	32.6	44.1	61.0	80.3	100.6	
1,2-Dichloro-3-ethylbenzene	C ₈ H ₈ Cl ₂	46.0	75.0	90.0	105.9	123.8	135.0	149.8	172.0	197.0	222.1	-40.8
1,2-Dichloro-4-ethylbenzene	C ₈ H ₈ Cl ₂	47.0	77.2	92.3	109.6	127.5	139.0	153.3	176.0	201.7	226.6	-76.4
1,4-Dichloro-2-ethylbenzene	C ₈ H ₈ Cl ₂	38.5	68.0	83.2	99.8	118.0	129.0	144.0	166.2	191.5	216.3	-61.2
<i>cis</i> -1,2-Dichloroethylene	C ₂ H ₂ Cl ₂	-58.4	-39.2	-29.9	-19.4	-7.9	-0.5	+9.5	24.6	41.0	59.0	-80.5
<i>trans</i> -1,2-Dichloro ethylene	C ₂ H ₂ Cl ₂	-65.4	-47.2	-38.0	-28.0	-17.0	-10.0	-0.2	+14.3	30.8	47.8	-50.0
Di(2-chloroethyl) ether	C ₄ H ₈ Cl ₂ O	23.5	49.3	62.0	76.0	91.5	101.5	114.5	134.0	155.4	178.5	
Dichlorofluoromethane	CHCl ₂ F	-91.3	-75.5	-67.5	-58.6	-48.8	-42.6	-33.9	-20.9	-6.2	+8.9	-135
1,5-Dichlorohexamethyltrisiloxane	C ₆ H ₁₈ Cl ₂ O ₂ Si ₃	26.0	52.0	65.1	79.0	94.8	105.0	118.2	138.3	160.2	184.0	-53.0
Dichloromethylphenylsilane	C ₇ H ₈ Cl ₂ Si	35.7	63.5	77.4	92.4	109.5	120.0	134.2	155.5	180.2	205.5	
1,1-Dichloro-2-methylpropane	C ₄ H ₈ Cl ₂	-31.0	-8.4	+2.6	14.6	28.2	37.0	48.2	65.8	85.4	106.0	
1,2-Dichloro-2-methylpropane	C ₄ H ₈ Cl ₂	-25.8	-4.2	+6.7	18.7	32.0	40.2	51.7	68.9	87.8	108.0	
1,3-Dichloro-2-methylpropane	C ₄ H ₈ Cl ₂	-3.0	+20.6	32.0	44.8	58.6	67.5	78.8	96.1	115.4	135.0	
2,4-Dichlorophenol	C ₆ H ₄ Cl ₂ O	53.0	80.0	92.8	107.7	123.4	133.5	146.0	165.2	187.5	210.0	45.0
2,6-Dichlorophenol	C ₆ H ₄ Cl ₂ O	59.5	87.6	101.0	115.5	131.6	141.8	154.6	175.5	197.7	220.0	

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
α,α-Dichlorophenylacetonitrile	C ₈ H ₅ Cl ₂ N	56.0	84.0	98.1	113.8	130.0	141.0	154.5	176.2	199.5	223.5	
Dichlorophenylarsine	C ₆ H ₅ AsCl ₂	61.8	100.0	116.0	133.1	151.0	163.2	178.9	202.8	228.8	256.5	
1,2-Dichloropropane	C ₃ H ₆ Cl ₂	-38.5	-17.0	-6.1	+6.0	19.4	28.0	39.4	57.0	76.0	96.8	
2,3-Dichlorostyrene	C ₈ H ₆ Cl ₂	61.0	90.1	104.6	120.5	137.8	149.0	163.5	185.7	210.0	235.0	
2,4-Dichlorostyrene	C ₈ H ₆ Cl ₂	53.5	82.2	97.4	111.8	129.2	140.0	153.8	176.0	200.0	225.0	
2,5-Dichlorostyrene	C ₈ H ₆ Cl ₂	55.5	83.9	98.2	114.0	131.0	142.0	155.8	178.0	202.5	227.0	
2,6-Dichlorostyrene	C ₈ H ₆ Cl ₂	47.8	75.7	90.0	105.5	122.4	133.3	147.6	169.0	193.5	217.0	
3,4-Dichlorostyrene	C ₈ H ₆ Cl ₂	57.2	86.0	100.4	116.2	133.7	144.6	158.2	181.5	205.7	230.0	
3,5-Dichlorostyrene	C ₈ H ₆ Cl ₂	53.5	82.2	97.4	111.8	129.2	140.0	153.8	176.0	200.0	225.0	
1,2-Dichlorotetraethylbenzene	C ₁₄ H ₂₀ Cl ₂	105.6	138.7	155.0	172.5	192.2	204.8	220.7	245.6	272.8	302.0	
1,4-Dichlorotetraethylbenzene	C ₁₄ H ₂₀ Cl ₂	91.7	126.1	143.8	162.0	183.2	195.8	212.0	238.5	265.8	296.5	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	C ₂ Cl ₂ F ₄	-95.4	-80.0	-72.3	-63.5	-53.7	-47.5	-39.1	-26.3	-12.0	+3.5	-94
Dichloro-4-tolylsilane	C ₇ H ₈ Cl ₂ Si	46.2	71.7	84.2	97.8	113.2	122.6	135.5	153.5	175.2	196.3	
3,4-Dichloro-α,α,α-trifluorotoluene	C ₇ H ₃ Cl ₂ F ₃	11.0	38.3	52.2	67.3	84.0	95.0	109.2	129.0	150.5	172.8	-12.1
Dicyclopentadiene	C ₁₀ H ₈		34.1	47.6	62.0	77.9	88.0	101.7	121.8	144.2	166.6	32.9
Diethoxydimethylsilane	C ₈ H ₁₆ O ₂ Si	-19.1	+2.4	13.3	25.3	38.0	46.3	57.6	74.2	93.2	113.5	
Diethoxydiphenylsilane	C ₁₆ H ₂₀ O ₂ Si	111.5	142.8	157.6	174.3	193.2	205.0	220.0	243.8	259.7	296.0	
Diethyl adipate	C ₁₀ H ₁₈ O ₄	74.0	106.6	123.0	138.3	154.6	165.8	179.0	198.2	219.1	240.0	-21
Diethylamine	C ₄ H ₁₁ N			-33.0	-22.6	-11.3	-4.0	+6.0	21.0	38.0	55.5	-38.9
N-Diethylamine	C ₁₀ H ₁₉ N	49.7	78.0	91.9	107.2	123.6	133.8	147.3	168.2	192.4	215.5	-34.4
Diethyl arsaniolate	C ₁₀ H ₁₆ As											
	NO ₃	38.0	62.6	74.8	88.0	102.6	111.8	123.8	141.9	161.0	181.0	
1,2-Diethylbenzene	C ₁₀ H ₁₄	22.3	48.7	62.0	76.4	92.5	102.6	116.2	136.7	159.0	183.5	-31.4
1,3-Diethylbenzene	C ₁₀ H ₁₄	20.7	46.8	59.9	74.5	90.4	100.7	114.4	134.8	156.9	181.1	-83.9
1,4-Diethylbenzene	C ₁₀ H ₁₄	20.7	47.1	60.3	74.7	91.1	101.3	115.3	136.1	159.0	183.8	-43.2
Diethyl carbonate	C ₆ H ₁₀ O ₃	-10.1	+12.3	23.8	36.0	49.5	57.9	69.7	86.5	105.8	125.8	-43
cis-Diethyl citraconate	C ₉ H ₁₄ O ₄	59.8	88.3	103.0	118.2	135.7	146.2	160.0	182.3	206.5	230.3	
Diethyl dioxosuccinate	C ₈ H ₁₀ O ₄	70.0	98.0	112.0	126.8	143.8	153.7	167.7	188.0	210.8	233.5	
Diethylene glycol	C ₄ H ₁₀ O ₃	91.8	120.0	133.8	148.0	164.3	174.0	187.5	207.0	226.5	244.8	
Diethyleneglycol-bis-chloroacetate	C ₈ H ₁₂ Cl ₂ O ₅	148.3	180.0	195.8	212.0	229.0	239.5	252.0	271.5	291.8	313.0	
Diethylene glycol dimethyl ether												
Di(2-methoxyethyl) ether	C ₆ H ₁₄ O ₃	13.0	37.6	50.0	63.0	77.5	86.8	99.5	118.0	138.5	159.8	
glycol ethyl ether	C ₆ H ₁₄ O ₃	45.3	72.0	85.8	100.3	116.7	126.8	140.3	159.0	180.3	201.9	
Diethyl ether	C ₄ H ₁₀ O	-74.3	-56.9	-48.1	-38.5	27.7	-21.8	-11.5	+2.2	17.9	34.6	-116.3
ethylmalonate	C ₉ H ₁₆ O ₄	50.8	77.8	91.6	106.0	122.4	132.4	146.0	166.0	188.7	211.5	
fumarate	C ₈ H ₁₂ O ₄	53.2	81.2	95.3	110.2	126.7	137.7	151.1	172.2	195.8	218.5	+0.6
glutarate	C ₉ H ₁₆ O ₄	65.6	94.7	109.7	125.4	142.8	153.2	167.8	189.5	212.8	237.0	
Diethylhexadecylamine	C ₂₀ H ₄₂ N	139.8	175.8	194.0	213.5	235.0	248.5	265.5	292.8	324.6	355.0	
Diethyl itaconate	C ₉ H ₁₄ O ₄	51.3	80.2	95.2	111.0	128.2	139.9	154.3	177.5	203.1	227.9	
ketone (3-pentanone)	C ₅ H ₁₀ O	-12.7	+7.5	17.2	27.9	39.4	46.7	56.2	70.6	86.3	102.7	-42
malate	C ₈ H ₁₄ O ₅	80.7	110.4	125.3	141.2	157.8	169.0	183.9	205.3	229.5	253.4	
maleate	C ₈ H ₁₂ O ₄	57.3	85.6	100.0	115.3	131.8	142.4	156.0	177.8	201.7	225.0	
malonate	C ₇ H ₁₂ O ₄	40.0	67.5	81.3	95.9	113.3	123.0	136.2	155.5	176.8	198.9	-49.8
mesaconate	C ₉ H ₁₄ O ₄	62.8	91.0	105.3	120.3	137.3	147.9	161.6	183.2	205.8	229.0	
oxalate	C ₆ H ₁₀ O ₄	47.4	71.8	83.8	96.8	110.6	119.7	130.8	147.9	166.2	185.7	-40.6
phthalate	C ₁₂ H ₁₄ O ₄	108.8	140.7	156.0	173.6	192.1	204.1	219.5	243.0	267.5	294.0	
sebacate	C ₁₄ H ₂₆ O ₄	125.3	156.2	172.1	189.8	207.5	218.4	234.4	255.8	280.3	305.5	1.3
2,5-Diethylstyrene	C ₁₂ H ₁₆	49.7	78.4	92.6	108.5	125.8	136.8	151.0	173.2	198.0	223.0	
Diethyl succinate	C ₈ H ₁₄ O ₄	54.6	83.0	96.6	111.7	127.8	138.2	151.1	171.7	193.8	216.5	-20.8
isosuccinate	C ₈ H ₁₄ O ₄	39.8	66.7	80.0	94.7	111.0	121.4	134.8	155.1	177.7	201.3	
sulfate	C ₄ H ₁₀ O ₄ S	47.0	74.0	87.7	102.1	118.0	128.6	142.5	162.5	185.5	209.5	-25.0
sulfide	C ₄ H ₁₀ S	-39.6	-18.6	-8.0	+3.5	16.1	24.2	35.0	51.3	69.7	88.0	-99.5
sulfite	C ₄ H ₁₀ O ₃ S	10.0	34.2	46.4	59.7	74.2	83.8	96.3	115.8	137.0	159.0	
d-Diethyl tartrate	C ₈ H ₁₄ O ₆	102.0	133.0	148.0	164.2	182.3	194.0	208.5	230.4	254.8	280.0	17
dl-Diethyl tartrate	C ₈ H ₁₄ O ₆	100.0	131.7	147.2	163.8	181.7	193.2	208.0	230.0	254.3	280.0	
3,5-Diethyltoluene	C ₁₁ H ₁₆	34.0	61.5	75.3	90.2	107.0	117.7	131.7	152.4	176.5	200.7	
Diethylzinc	C ₄ H ₁₀ Zn	-22.4	0.0	+11.7	24.2	38.0	47.2	59.1	77.0	97.3	118.0	-28
1-Dihydrocarvone	C ₁₀ H ₁₆ O	46.6	75.5	90.0	106.0	123.7	134.7	149.7	171.8	197.0	223.0	
Dihydrocitronellol	C ₁₀ H ₂₀ O	68.0	91.7	103.0	115.0	127.6	136.7	145.9	160.2	176.8	193.5	
1,4-Dihydroxyanthraquinone	C ₁₄ H ₈ O ₄	196.7	239.8	259.8	282.0	307.4	323.3	344.5	377.8	413.0	450.0	194
Dimethylacetylene (2-butyne)	C ₄ H ₆	-73.0	-57.9	-50.5	-42.5	-33.9	-27.8	-18.8	-5.0	+10.6	27.2	-32.5
Dimethylamine	C ₂ H ₇ N	-87.7	-72.2	-64.6	-56.0	-46.7	-40.7	-32.6	-20.4	-7.1	+7.4	-96
N,N-Dimethylaniline	C ₈ H ₁₁ N	29.5	56.3	70.0	84.8	101.6	111.9	125.8	146.5	169.2	193.1	+2.5
Dimethyl arsaniolate	C ₈ H ₁₂ AsNO ₃	15.0	39.6	51.8	65.0	79.7	88.6	101.0	119.8	140.3	160.5	
Di(α-methylbenzyl) ether	C ₁₆ H ₁₈ O	96.7	128.3	144.0	160.3	179.6	191.5	206.8	229.7	254.8	281.0	
2,2-Dimethylbutane	C ₆ H ₁₄	-69.3	-50.7	-41.5	-31.1	-19.5	-12.1	-2.0	+13.4	31.0	49.7	-99.8
2,3-Dimethylbutane	C ₆ H ₁₄	-63.6	-44.5	-34.9	-24.1	-12.4	-4.9	+5.4	21.1	39.0	58.0	-128.2
Dimethyl citraconate	C ₇ H ₁₀ O ₄	50.8	78.2	91.8	106.5	122.6	132.7	145.8	165.8	188.0	210.5	
1,1-Dimethylcyclohexane	C ₈ H ₁₆	-24.4	-1.4	+10.3	23.0	37.3	45.7	57.9	76.2	97.2	119.5	-34
cis-1,2-Dimethylcyclohexane	C ₈ H ₁₆	-15.9	+7.3	18.4	31.1	45.3	54.4	66.8	85.6	107.0	129.7	-50.0
trans-1,2-Dimethylcyclohexane	C ₈ H ₁₆	-21.1	+1.7	13.0	25.6	39.7	48.7	61.0	79.6	100.9	123.4	-88.0
trans-1,3-Dimethylcyclohexane	C ₈ H ₁₆	-19.4	+3.4	14.9	27.4	41.4	50.4	62.5	81.0	102.1	124.4	-92.0
cis-1,3-Dimethylcyclohexane	C ₈ H ₁₆	-22.7	0.0	+11.2	23.6	37.5	46.4	58.5	76.9	97.8	120.1	-76.2
cis-1,4-Dimethylcyclohexane	C ₈ H ₁₆	-20.0	+3.2	14.5	27.1	41.1	50.1	62.3	80.8	101.9	124.3	-87.4
trans-1,4-Dimethylcyclohexane	C ₈ H ₁₆	-24.3	-1.7	+10.1	22.6	36.5	45.4	57.6	76.0	97.0	119.3	-36.9

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
Dimethyl ether	C ₂ H ₆ O	-115.7	-101.1	-93.3	-85.2	-76.2	-70.4	-62.7	-50.9	-37.8	-23.7	-138.5
2,2-Dimethylhexane	C ₈ H ₁₈	-29.7	-7.9	+3.1	15.0	28.2	36.7	48.2	65.7	85.6	106.8	
2,3-Dimethylhexane	C ₈ H ₁₈	-23.0	-1.1	+9.9	22.1	35.6	44.2	56.0	73.8	94.1	115.6	
2,4-Dimethylhexane	C ₈ H ₁₈	-26.9	-5.3	+5.2	17.2	30.5	39.0	50.6	68.1	88.2	109.4	
2,5-Dimethylhexane	C ₈ H ₁₈	-26.7	-5.5	+5.3	17.2	30.4	38.9	50.5	68.0	87.9	109.1	-90.7
3,3-Dimethylhexane	C ₈ H ₁₈	-25.8	-4.4	+6.1	18.2	31.7	40.4	52.5	70.0	90.4	112.0	
3,4-Dimethylhexane	C ₈ H ₁₈	-22.1	+0.2	11.3	23.5	37.1	45.8	57.7	75.6	96.0	117.7	
Dimethyl itaconate	C ₇ H ₁₀ O ₄	69.3	94.0	106.6	119.7	133.7	142.6	153.7	171.0	189.8	208.0	38
1-Dimethyl malate	C ₆ H ₁₀ O ₅	75.4	104.0	118.3	133.8	150.1	160.4	175.1	196.3	219.5	242.6	
Dimethyl maleate	C ₆ H ₈ O ₄	45.7	73.0	86.4	101.3	117.2	127.1	140.4	160.0	182.2	205.0	
malonate	C ₅ H ₈ O ₄	35.0	59.8	72.0	85.0	100.0	109.7	121.9	140.0	159.8	180.7	-62
trans-Dimethyl mesaconate	C ₇ H ₁₀ O ₄	46.8	74.0	87.8	102.1	118.0	127.8	141.5	161.0	183.5	206.0	
2,7-Dimethyloctane	C ₁₀ H ₂₂	+6.3	30.5	42.3	55.8	71.2	80.8	93.9	114.0	136.0	159.7	-52.8
Dimethyl oxalate	C ₄ H ₆ O ₄	20.0	44.0	56.0	69.4	83.6	92.8	104.8	123.3	143.3	163.3	
2,2-Dimethylpentane	C ₇ H ₁₆	-49.0	-28.7	-18.7	-7.5	+5.0	13.0	23.9	40.3	59.2	79.2	-123.7
2,3-Dimethylpentane	C ₇ H ₁₆	-42.0	-20.8	-10.3	+1.1	13.9	22.1	33.3	50.1	69.4	89.8	-135
2,4-Dimethylpentane	C ₇ H ₁₆	-48.0	-27.4	-17.1	-5.9	+6.5	14.5	25.4	41.8	60.6	80.5	-119.5
3,3-Dimethylpentane	C ₇ H ₁₆	-45.9	-25.0	-14.4	-2.9	+9.9	18.1	29.3	46.2	65.5	86.1	-135.0
2,3-Dimethylphenol (2,3-xyleneol)	C ₈ H ₁₀ O	56.0	83.8	97.6	112.0	129.2	139.5	152.2	173.0	196.0	218.0	75
2,4-Dimethylphenol (2,4-xyleneol)	C ₈ H ₁₀ O	51.8	78.0	91.3	105.0	121.5	131.0	143.0	161.5	184.2	211.5	25.5
2,5-Dimethylphenol (2,5-xyleneol)	C ₈ H ₁₀ O	51.8	78.0	91.3	105.0	121.5	131.0	143.0	161.5	184.2	211.5	74.5
3,4-Dimethylphenol (3,4-xyleneol)	C ₈ H ₁₀ O	66.2	93.8	107.7	122.0	138.0	148.0	161.0	181.5	203.6	225.2	62.5
3,5-Dimethylphenol (3,5-xyleneol)	C ₈ H ₁₀ O	62.0	89.2	102.4	117.0	133.3	143.5	156.0	176.2	197.8	219.5	68
Dimethylphenylsilane	C ₈ H ₁₂ Si	+5.3	30.3	42.6	56.2	71.4	81.3	94.2	114.2	136.4	159.3	
Dimethyl phthalate	C ₁₀ H ₁₀ O ₄	100.3	131.8	147.6	164.0	182.8	194.0	210.0	232.7	257.8	283.7	
3,5-Dimethyl-1,2-pyrone	C ₇ H ₈ O ₂	78.6	107.6	122.0	136.4	152.7	163.8	177.5	198.0	221.0	245.0	51.5
4,6-Dimethylresorcinol	C ₈ H ₁₀ O ₂	49.0	76.8	90.7	105.8	122.5	133.2	147.3	167.8	192.0	215.0	
Dimethyl sebacate	C ₁₂ H ₂₂ O ₄	104.0	139.8	156.2	175.8	196.0	208.0	222.6	245.0	269.6	293.5	38
2,4-Dimethylstyrene	C ₁₀ H ₁₂	34.2	61.9	75.8	90.8	107.7	118.0	132.3	153.2	177.5	202.0	
2,5-Dimethylstyrene	C ₁₀ H ₁₂	29.0	55.9	69.0	84.0	100.2	110.7	124.7	145.6	168.7	193.0	
α,α-Dimethylsuccinic anhydride	C ₆ H ₈ O ₃	61.4	88.1	102.0	116.3	132.3	142.4	155.3	175.8	197.5	219.5	
Dimethyl sulfide	C ₂ H ₆ S	-75.6	-58.0	-49.2	-39.4	-28.4	-21.4	-12.0	+2.6	18.7	36.0	-83.2
d-Dimethyl tartrate	C ₆ H ₁₀ O ₆	102.1	133.2	148.2	164.3	182.4	193.8	208.8	230.5	255.0	280.0	61.5
dl-Dimethyl tartrate	C ₆ H ₁₀ O ₆	100.4	131.8	147.5	164.0	182.4	193.8	209.5	232.3	257.4	282.0	89
N,N-Dimethyl-2-toluidine	C ₉ H ₁₃ N	28.8	54.1	66.2	80.2	95.0	105.2	118.1	138.3	161.5	184.8	-61
N,N-Dimethyl-4-toluidine	C ₉ H ₁₃ N	50.1	74.3	86.7	100.0	116.3	126.4	140.3	161.6	185.4	209.5	
Di(nitrosomethyl) amine	C ₂ H ₅ N ₂ O ₂	+3.2	27.8	40.0	53.7	68.2	77.7	90.3	110.0	131.3	153.0	
Diosphenol	C ₁₀ H ₁₆ O ₂	66.7	95.4	109.0	124.0	141.2	151.3	165.6	186.2	209.5	232.0	
1,4-Dioxane	C ₄ H ₈ O ₂	-35.8	-12.8	-1.2	+12.0	25.2	33.8	45.1	62.3	81.8	101.1	10
Dipentene	C ₁₀ H ₁₆	14.0	40.4	53.8	68.2	84.3	94.6	108.3	128.2	150.5	174.6	
Diphenylamine	C ₁₂ H ₁₁ N	108.3	141.7	157.0	175.2	194.3	206.9	222.8	247.5	274.1	302.0	52.9
Diphenyl carbinol (benzhydrol)	C ₁₃ H ₁₂ O	110.0	145.0	162.0	180.9	200.0	212.0	227.5	250.0	275.6	301.0	68.5
chlorophosphate	C ₁₂ H ₁₀ ClPO ₃	121.5	160.5	182.0	203.8	227.9	244.2	265.0	299.5	337.2	378.0	
disulfide	C ₁₂ H ₁₀ S ₂	131.6	164.0	180.0	197.0	214.8	226.2	241.3	262.6	285.8	310.0	61
1,2-Diphenylethane (dibenzyl)	C ₁₄ H ₁₄	86.8	119.8	136.0	153.7	173.7	186.0	202.8	227.8	255.0	284.0	51.5
Diphenyl ether	C ₁₂ H ₁₀ O	66.1	97.8	114.0	130.8	150.0	162.0	178.8	203.3	230.7	258.5	27
1,1-Diphenylethylene	C ₁₄ H ₁₂	87.4	119.6	135.0	151.8	170.8	183.4	198.6	222.8	249.8	277.0	
trans-Diphenylethylene	C ₁₄ H ₁₂	113.2	145.8	161.0	179.8	199.0	211.5	227.4	251.7	278.3	306.5	124
1,1-Diphenylhydrazine	C ₁₂ H ₁₂ N ₂	126.0	159.3	176.1	194.0	213.5	225.9	242.5	267.2	294.0	322.2	44
Diphenylmethane	C ₁₃ H ₁₂	76.0	107.4	122.8	139.8	157.8	170.2	186.3	210.7	237.5	264.5	26.5
Diphenyl sulfide	C ₁₂ H ₁₀ S	96.1	129.0	145.0	162.0	182.8	194.8	211.8	236.8	263.9	292.5	
Diphenyl-2-tolyl thiophosphate	C ₁₈ H ₁₇ O ₃ PS	159.7	179.8	201.6	215.5	230.6	240.4	252.5	270.3	290.0	310.0	
1,2-Dipropoxyethane	C ₈ H ₁₈ O ₂	-38.8	-10.3	+5.0	22.3	42.3	55.8	74.2	103.8	140.0	180.0	
1,2-Diisopropylbenzene	C ₁₂ H ₁₈	40.0	67.8	81.8	96.8	114.0	124.3	138.7	159.8	184.3	209.0	
1,3-Diisopropylbenzene	C ₁₂ H ₁₈	34.7	62.3	76.0	91.2	107.9	118.2	132.3	153.7	177.6	202.0	-105
Dipropylene glycol	C ₆ H ₁₄ O ₃	73.8	102.1	116.2	131.3	147.4	156.5	169.9	189.9	210.5	231.8	
Dipropyleneglycol monobutyl ether	C ₁₀ H ₂₂ O ₃	64.7	92.0	106.0	120.4	136.3	146.3	159.8	180.0	203.8	227.0	
isopropyl ether	C ₉ H ₂₀ O ₃	46.0	72.8	86.2	100.8	117.0	126.8	140.3	160.0	183.1	205.6	
Di-n-propyl ether	C ₆ H ₁₄ O	-43.3	-22.3	-11.8	0.0	+13.2	21.6	33.0	50.3	69.5	89.5	-122
Diisopropyl ether	C ₆ H ₁₄ O	-57.0	-37.4	-27.4	-16.7	-4.5	+3.4	13.7	30.0	48.2	67.5	-60
Di-n-propyl ketone (4-heptanone)	C ₇ H ₁₄ O	23.0	44.4	55.0	66.2	78.1	85.8	96.0	111.2	127.3	143.7	-32.6
Di-n-propyl oxalate	C ₈ H ₁₄ O ₄	53.4	80.2	93.9	108.6	124.6	134.8	148.1	168.0	190.3	213.5	
Diisopropyl oxalate	C ₈ H ₁₄ O ₄	43.2	69.0	81.9	95.6	110.5	120.0	132.6	151.2	171.8	193.5	
Di-n-propyl succinate	C ₁₀ H ₁₈ O ₄	77.5	107.6	122.2	138.0	154.8	166.0	180.3	202.5	226.5	250.8	
Di-n-propyl d-tartrate	C ₁₀ H ₁₈ O ₆	115.6	147.7	163.5	180.4	199.7	211.7	227.0	250.1	275.6	303.0	
Diisopropyl d-tartrate	C ₁₀ H ₁₈ O ₆	103.7	133.7	148.2	164.0	181.8	192.6	207.3	228.2	251.8	275.0	
Divinyl acetylene (1,5-hexadiene-3-yne)	C ₆ H ₆	-45.1	-24.4	-14.0	-2.8	+10.0	18.1	29.5	46.0	64.4	84.0	
1,3-Divinylbenzene	C ₁₀ H ₁₀	32.7	60.0	73.8	88.7	105.5	116.0	130.0	151.4	175.2	199.5	-66.9
Docosane	C ₂₂ H ₄₆	157.8	195.4	213.0	233.5	254.5	268.3	286.0	314.2	343.5	376.0	44.5
n-Dodecane	C ₁₂ H ₂₆	47.8	75.8	90.0	104.6	121.7	132.1	146.2	167.2	191.0	216.2	-9.6
1-Dodecene	C ₁₂ H ₂₄	47.2	74.0	87.8	102.4	118.6	128.5	142.3	162.2	185.5	208.0	-31.5
n-Dodecyl alcohol	C ₁₂ H ₂₆ O	91.0	120.2	134.7	150.0	167.2	177.8	192.0	213.0	235.7	259.0	24
Dodecylamine	C ₁₂ H ₂₇ N	82.8	111.8	127.8	141.6	157.4	168.0	182.1	203.0	225.0	248.0	
Dodecyltrimethylsilane	C ₁₅ H ₃₄ Si	91.2	122.1	137.7	153.8	172.1	184.2	199.5	222.0	248.0	273.0	
Elaidic acid	C ₁₈ H ₃₄ O ₂	171.3	206.7	223.5	242.3	260.8	273.0	288.0	312.4	337.0	362.0	51.5

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
Epichlorohydrin	C ₃ H ₅ ClO	-16.5	+5.6	16.6	29.0	42.0	50.6	62.0	79.3	98.0	117.9	-25.6
1,2-Epoxy-2-methylpropane	C ₄ H ₈ O	-69.0	-50.0	-40.3	-29.5	-17.3	-9.7	+1.2	17.5	36.0	55.5	
Erucic acid	C ₂₂ H ₄₂ O ₂	206.7	239.7	254.5	270.6	289.1	300.2	314.4	336.5	358.8	381.5	33.5
Estragole (<i>p</i> -methoxy allyl benzene)	C ₁₀ H ₁₂ O	52.6	80.0	93.7	108.4	124.6	135.2	148.5	168.7	192.0	215.0	
Ethane	C ₂ H ₆	-159.5	-148.5	-142.9	-136.7	-129.8	-125.4	-119.3	-110.2	-99.7	-88.6	-183.2
Ethoxydimethylphenylsilane	C ₁₀ H ₁₆ OSi	36.3	63.1	76.2	91.0	107.2	127.5	131.4	151.5	175.0	199.5	
Ethoxytrimethylsilane	C ₅ H ₁₄ OSi	-50.9	-31.0	-20.7	-9.8	+3.7	11.5	22.1	38.1	56.3	75.7	
Ethoxytriphenylsilane	C ₂₀ H ₃₀ OSi	167.0	198.2	213.5	230.0	247.0	258.3	273.5	295.0	319.5	344.0	
Ethyl acetate	C ₄ H ₈ O ₂	-43.4	-23.5	-13.5	-3.0	+9.1	16.6	27.0	42.0	59.3	77.1	-82.4
acetoacetate	C ₆ H ₁₀ O ₃	28.5	54.0	67.3	81.1	96.2	106.0	118.5	138.0	158.2	180.8	-45
Ethylacetylene (1-butyne)	C ₄ H ₆	-92.5	-76.7	-68.7	-59.9	-50.0	-43.4	-34.9	-21.6	-6.9	+8.7	-130
Ethyl acrylate	C ₅ H ₈ O ₂	-29.5	-8.7	+2.0	13.0	26.0	33.5	44.5	61.5	80.0	99.5	-71.2
α-Ethylacrylic acid	C ₅ H ₈ O ₂	47.0	70.7	82.0	94.4	108.1	116.7	127.5	144.0	160.7	179.2	
α-Ethylacrylonitrile	C ₅ H ₇ N	-29.0	-6.4	+5.0	17.7	31.8	40.6	53.0	71.6	92.2	114.0	
Ethyl alcohol (ethanol)	C ₂ H ₆ O	-31.3	-12.0	-2.3	+8.0	19.0	26.0	34.9	48.4	63.5	78.4	-112
Ethylamine	C ₂ H ₇ N	-82.3	-66.4	-58.3	-48.6	-39.8	-33.4	-25.1	-12.3	+2.0	16.6	-80.6
4-Ethylaniline	C ₈ H ₁₁ N	52.0	80.0	93.8	109.0	125.7	136.0	149.8	170.6	194.2	217.4	-4
N-Ethylaniline	C ₈ H ₁₁ N	38.5	66.4	80.6	96.0	113.2	123.6	137.3	156.9	180.8	204.0	-63.5
2-Ethylanisole	C ₉ H ₁₂ O	29.7	55.9	69.0	83.1	98.8	109.0	122.3	142.1	164.2	187.1	
3-Ethylanisole	C ₉ H ₁₂ O	33.7	60.3	73.9	88.5	104.8	115.5	129.2	149.7	172.8	196.5	
4-Ethylanisole	C ₉ H ₁₂ O	33.5	60.2	73.9	88.5	104.7	115.4	128.4	149.2	172.3	196.5	
Ethylbenzene	C ₈ H ₁₀	-9.8	+13.9	25.9	38.6	52.8	61.8	74.1	92.7	113.8	136.2	-94.9
Ethyl benzoate	C ₉ H ₁₀ O ₂	44.0	72.0	86.0	101.4	118.2	129.0	143.2	164.8	188.4	213.4	-34.6
benzoylacetate	C ₁₁ H ₁₂ O ₃	107.6	136.4	150.3	166.8	181.8	191.9	205.0	223.8	244.7	265.0	
bromide	C ₂ H ₅ Br	-74.3	-56.4	-47.5	-37.8	-26.7	-19.5	-10.0	+4.5	21.0	38.4	-117.8
α-bromoisobutyrate	C ₆ H ₁₁ BrO ₂	10.6	35.8	48.0	61.8	77.0	86.7	99.8	119.7	141.2	163.6	
<i>n</i> -butyrate	C ₆ H ₁₂ O ₂	-18.4	+4.0	15.3	27.8	41.5	50.1	62.0	79.8	100.0	121.0	-93.3
isobutyrate	C ₆ H ₁₂ O ₂	-24.3	-2.4	+8.4	20.6	33.8	42.3	53.5	71.0	90.0	110.0	-88.2
Ethylcamphoronic anhydride	C ₁₁ H ₁₆ O ₅	118.2	149.8	165.0	181.8	199.8	211.5	226.6	248.5	272.8	298.0	
Ethyl isocaproate	C ₈ H ₁₆ O ₂	11.0	35.8	48.0	61.7	76.3	85.8	98.4	117.8	139.2	160.4	
carbamate	C ₃ H ₇ NO ₂		65.8	77.8	91.0	105.6	114.8	126.2	144.2	164.0	184.0	49
carbanilate	C ₉ H ₁₁ NO ₂	107.8	131.8	143.7	155.5	168.8	177.3	187.9	203.8	220.0	237.0	52.5
Ethylcetylamine	C ₁₈ H ₃₉ N	133.2	168.2	186.0	205.5	226.5	239.8	256.8	283.3	313.0	342.0	
Ethyl chloride	C ₂ H ₅ Cl	-89.8	-73.9	-65.8	-56.8	-47.0	-40.6	-32.0	-18.6	-3.9	+12.3	-139
chloroacetate	C ₃ H ₇ ClO ₂	+1.0	25.4	37.5	50.4	65.2	74.0	86.0	103.8	123.8	144.2	-26
chloroglyoxylate	C ₄ H ₅ ClO ₃	-5.1	+18.0	29.9	42.0	56.0	65.2	76.6	94.5	114.7	135.0	
α-chloropropionate	C ₃ H ₅ ClO ₂	+6.6	30.2	41.9	54.3	68.2	77.3	89.3	107.2	126.2	146.5	
<i>trans</i> -cinnamate	C ₁₁ H ₁₂ O ₂	87.6	108.5	134.0	150.3	169.2	181.2	196.0	219.3	245.0	271.0	12
3-Ethylcumene	C ₁₁ H ₁₆	28.3	55.5	68.8	83.6	99.9	110.2	124.3	145.4	168.2	193.0	
4-Ethylcumene	C ₁₁ H ₁₆	31.5	58.4	72.0	86.7	103.3	113.8	127.2	148.3	171.8	195.8	
Ethyl cyanoacetate	C ₅ H ₇ NO ₂	67.8	93.5	106.0	119.8	133.8	142.1	152.8	169.8	187.8	206.0	
Ethylcyclohexane	C ₈ H ₁₆	-14.5	+9.2	20.6	33.4	47.6	56.7	69.0	87.8	109.1	131.8	-111.3
Ethylcyclopentane	C ₇ H ₁₄	-32.2	-10.8	-0.1	+11.7	25.0	33.4	45.0	62.4	82.3	103.4	-138.6
Ethyl dichloroacetate	C ₄ H ₆ Cl ₂ O ₂	9.6	34.0	46.3	59.5	74.0	83.6	96.1	115.2	135.9	156.5	
<i>N,N</i> -diethyloxamate	C ₈ H ₁₅ NO ₃	76.0	106.3	121.7	137.7	154.4	166.0	180.3	202.8	226.5	252.0	
N-Ethylidiphenylamine	C ₁₄ H ₁₅ N	98.3	130.2	146.0	162.8	182.0	193.7	209.8	233.0	258.8	286.0	
Ethylene	C ₂ H ₄	-168.3	-158.3	-153.2	-147.6	-141.3	-137.3	-131.8	-123.4	-113.9	-103.7	-169
Ethylene-bis-(chloroacetate)	C ₆ H ₈ Cl ₂ O ₄	112.0	142.4	158.0	173.5	191.0	201.8	215.0	237.3	259.5	283.5	
Ethylene chlorohydrin (2-chloroethanol)	C ₂ H ₅ ClO	-4.0	+19.0	30.3	42.5	56.0	64.1	75.0	91.8	110.0	128.8	-69
diamine (1,2-ethanediamine)	C ₂ H ₈ N ₂	-11.0	+10.5	21.5	33.0	45.8	53.8	62.5	81.0	99.0	117.2	8.5
dibromide (1,2-dibromethane)	C ₂ H ₄ Br ₂	-27.0	+4.7	18.6	32.7	48.0	57.9	70.4	89.8	110.1	131.5	10
dichloride (1,2-dichloroethane)	C ₂ H ₄ Cl ₂	-44.5	-24.0	-13.6	-2.4	+10.0	18.1	29.4	45.7	64.0	82.4	-35.3
glycol (1,2-ethanediol)	C ₂ H ₆ O ₂	53.0	79.7	92.1	105.8	120.0	129.5	141.8	158.5	178.5	197.3	-15.6
glycol diethyl ether	C ₆ H ₁₄ O ₂	-33.5	-10.2	+1.6	14.7	29.7	39.0	51.8	71.8	94.1	119.5	
(1,2-diethoxyethane)												
glycol dimethyl ether	C ₄ H ₁₀ O ₂	-48.0	-26.2	-15.3	-3.0	+10.7	19.7	31.8	50.0	70.8	93.0	
(1,2-dimethoxyethane)												
glycol monomethyl ether	C ₃ H ₈ O ₂	-13.5	+10.2	22.0	34.3	47.8	56.4	68.0	85.3	104.3	124.4	
(2-methoxyethanol)												
oxide	C ₂ H ₄ O	-89.7	-73.8	-65.7	-56.6	-46.9	-40.7	-32.1	-19.5	-4.9	+10.7	-111.3
Ethyl α-ethylacetoacetate	C ₈ H ₁₄ O ₃	40.5	67.3	80.2	94.6	110.3	120.6	133.8	153.2	175.6	198.0	
fluoride	C ₂ H ₅ F	-117.0	-103.8	-97.7	-90.0	-81.8	-76.4	-69.3	-58.0	-45.5	-32.0	
formate	C ₃ H ₆ O ₂	-60.5	-42.2	-33.0	-22.7	-11.5	-4.3	-5.4	20.0	37.1	54.3	-79
2-furoate	C ₇ H ₈ O ₃	37.6	63.8	77.1	91.5	107.5	117.5	130.4	150.1	172.5	195.0	34
glycolate	C ₄ H ₈ O ₃	14.3	38.8	50.5	63.9	78.1	87.6	99.8	117.8	138.0	158.2	
3-Ethylhexane	C ₈ H ₁₈	-20.0	+2.1	12.8	25.0	38.5	47.1	58.9	76.7	97.0	118.5	
2-Ethylhexyl acrylate	C ₁₁ H ₂₀ O ₂	50.0	77.7	91.8	106.3	123.7	134.0	147.9	168.2	192.2	216.0	
Ethylidene chloride (1,1-dichloroethane)	C ₂ H ₄ Cl ₂	-60.7	-41.9	-32.3	-21.9	-10.2	-2.9	+7.2	22.4	39.8	57.4	-96.7
fluoride (1,1-difluoroethane)	C ₂ H ₄ F ₂	-112.5	-98.4	-91.7	-84.1	-75.8	-70.4	-63.2	-52.0	-39.5	-26.5	-117
Ethyl iodide	C ₂ H ₅ I	-54.4	-34.3	-24.3	-13.1	-0.9	+7.2	18.0	34.1	52.3	72.4	-105
Ethyl <i>l</i> -leucinate	C ₈ H ₁₇ NO ₂	27.8	57.3	72.1	88.0	106.0	117.8	131.8	149.8	167.3	184.0	
Ethyl levulinate	C ₇ H ₁₂ O ₃	47.3	74.0	87.3	101.8	117.7	127.6	141.3	160.2	183.0	206.2	
Ethyl mercaptan (ethanethiol)	C ₂ H ₆ S	-76.7	-59.1	-50.2	-40.7	-29.8	-22.4	-13.0	+1.5	17.7	35.0	-121
Ethyl methylcarbamate	C ₄ H ₉ NO ₂	26.5	51.0	63.2	76.1	91.0	100.0	112.0	130.0	149.8	170.0	
Ethyl methyl ether	C ₃ H ₈ O	-91.0	-75.6	-67.8	-59.1	-49.4	-43.3	-34.8	-22.0	-7.8	+7.5	

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
1-Ethlynaphthalene	C ₁₂ H ₁₂	70.0	101.4	116.8	133.8	152.0	164.1	180.0	204.6	230.8	258.1	−27
Ethyl α-naphthyl ketone (1-propionaphthone)	C ₁₃ H ₁₂ O	124.0	155.5	171.0	188.1	206.9	218.2	233.5	255.5	280.2	306.0	
Ethyl 3-nitrobenzoate	C ₉ H ₉ NO ₄	108.1	140.2	155.0	173.6	192.6	205.0	220.3	244.6	270.6	298.0	47
3-Ethylpentane	C ₇ H ₁₆	−37.8	−17.0	−6.8	+4.7	17.5	25.7	36.9	53.8	73.0	93.5	−118.6
4-Ethylphenetole	C ₁₀ H ₁₄ O	48.5	75.7	89.5	103.8	119.8	129.8	143.5	163.2	185.7	208.0	
2-Ethylphenol	C ₈ H ₁₀ O	46.2	73.4	87.0	101.5	117.9	127.9	141.8	161.6	184.5	207.5	−45
3-Ethylphenol	C ₈ H ₁₀ O	60.0	86.8	100.2	114.5	130.0	139.8	152.0	171.8	193.3	214.0	−4
4-Ethylphenol	C ₈ H ₁₀ O	59.3	86.5	100.2	115.0	131.3	141.7	154.2	175.0	197.4	219.0	46.5
Ethyl phenyl ether (phenetole)	C ₈ H ₁₀ O	18.1	43.7	56.4	70.3	86.6	95.4	108.4	127.9	149.8	172.0	−30.2
Ethyl propionate	C ₅ H ₁₀ O ₂	−28.0	−7.2	+3.4	14.3	27.2	35.1	45.2	61.7	79.8	99.1	−72.6
Ethyl propyl ether	C ₅ H ₁₂ O	−64.3	−45.0	−35.0	−24.0	−12.0	−4.0	+6.8	23.3	41.6	61.7	
Ethyl salicylate	C ₉ H ₁₀ O ₃	61.2	90.0	104.2	119.3	136.7	147.6	161.5	183.7	207.0	231.5	1.3
3-Ethylstyrene	C ₁₀ H ₁₂	28.3	55.0	68.3	82.8	99.2	109.6	123.2	144.0	167.2	191.5	
4-Ethylstyrene	C ₁₀ H ₁₂	26.0	52.7	66.3	80.8	97.3	107.6	121.5	142.0	165.0	189.0	
Ethylisothiocyanate	C ₃ H ₅ NS	13.2	+10.6	22.8	36.1	50.8	59.8	71.9	90.0	110.1	131.0	−5.9
2-Ethyltoluene	C ₉ H ₁₂	9.4	34.8	47.6	61.2	76.4	86.0	99.0	119.0	141.4	165.1	
3-Ethyltoluene	C ₉ H ₁₂	7.2	32.3	44.7	58.2	73.3	82.9	95.9	115.5	137.8	161.3	−95.5
4-Ethyltoluene	C ₉ H ₁₂	7.6	32.7	44.9	58.5	73.6	83.2	96.3	116.1	136.4	162.0	
Ethyl trichloroacetate	C ₄ H ₅ Cl ₃ O ₂	20.7	45.5	57.7	70.6	85.5	94.4	107.4	125.8	146.0	167.0	
Ethyltrimethylsilane	C ₅ H ₁₄ Si	−60.6	−41.4	−31.8	−21.0	−9.0	−1.2	+9.2	25.0	42.8	62.0	
Ethyltrimethyltin	C ₅ H ₁₄ Sn	−30.0	−7.6	+3.8	16.1	30.0	38.4	50.0	67.3	87.6	108.8	
Ethyl isovalerate	C ₇ H ₁₄ O ₂	−6.1	+17.0	28.7	41.3	55.2	64.0	75.9	93.8	114.0	134.3	−99.3
2-Ethyl-1,4-xylene	C ₁₀ H ₁₄	25.7	52.0	65.6	79.8	96.0	106.2	120.0	140.2	163.1	186.9	
4-Ethyl-1,3-xylene	C ₁₀ H ₁₄	26.3	53.0	66.4	80.6	97.2	107.4	121.2	141.8	164.4	188.4	
5-Ethyl-1,3-xylene	C ₁₀ H ₁₄	22.1	48.8	62.1	76.5	92.6	103.0	116.5	137.4	159.6	183.7	
Eugenol	C ₁₀ H ₁₂ O ₂	78.4	108.1	123.0	138.7	155.8	167.3	182.2	204.7	228.3	253.5	
iso-Eugenol	C ₁₀ H ₁₂ O ₂	86.3	117.0	132.4	149.0	167.0	178.2	194.0	217.2	242.3	267.5	−10
Eugenyl acetate	C ₁₂ H ₁₄ O ₃	101.6	132.3	148.0	164.2	183.0	194.0	209.7	232.5	257.4	282.0	295
Fencholic acid	C ₁₀ H ₁₆ O ₂	101.7	128.7	142.3	155.8	171.8	181.5	194.0	215.0	237.8	264.1	19
d-Fenchone	C ₁₀ H ₁₆ O	28.0	54.7	68.3	83.0	99.5	109.8	123.6	144.0	166.8	191.0	5
dl-Fenchyl alcohol	C ₁₀ H ₁₈ O	45.8	70.3	82.1	95.6	110.8	120.2	132.3	150.0	173.2	201.0	35
Fluorene	C ₁₃ H ₁₀	129.3	129.3	146.0	164.2	185.2	197.8	214.7	240.3	268.6	295.0	113
Fluorobenzene	C ₆ H ₅ F	−43.4	−22.8	−12.4	−1.2	+11.5	19.6	30.4	47.2	65.7	84.7	−42.1
2-Fluorotoluene	C ₇ H ₇ F	−24.2	−2.2	+8.9	21.4	34.7	43.7	55.3	73.0	92.8	114.0	−80
3-Fluorotoluene	C ₇ H ₇ F	−22.4	−0.3	+11.0	23.4	37.0	45.8	57.5	75.4	95.4	116.0	−110.8
4-Fluorotoluene	C ₇ H ₇ F	−21.8	+0.3	11.8	24.0	37.8	46.5	58.1	76.0	96.1	117.0	
Formaldehyde	CH ₂ O			−88.0	−79.6	−70.6	−65.0	−57.3	−46.0	−33.0	−19.5	−92
Formamide	CH ₃ NO	70.5	96.3	109.5	122.5	137.5	147.0	157.5	175.5	193.5	210.5	
Formic acid	CH ₂ O ₂	−20.0	−5.0	+2.1	10.3	24.0	32.4	43.8	61.4	80.3	100.6	8.2
trans-Fumaryl chloride	C ₄ H ₂ Cl ₂ O ₂	+15.0	38.5	51.8	65.0	79.5	89.0	101.0	120.0	140.0	160.0	
Furfural (2-furaldehyde)	C ₅ H ₄ O ₂	18.5	42.6	54.8	67.8	82.1	91.5	103.4	121.8	141.8	161.8	
Furfuryl alcohol	C ₅ H ₆ O ₂	31.8	56.0	68.0	81.0	95.7	104.0	115.9	133.1	151.8	170.0	
Geraniol	C ₁₀ H ₁₈ O	69.2	96.8	110.0	125.6	141.8	151.5	165.3	185.6	207.8	230.0	
Geranyl acetate	C ₁₂ H ₂₀ O ₂	73.5	102.7	117.9	133.0	150.0	160.3	175.2	196.3	219.8	243.3	
Geranyl n-butylate	C ₁₄ H ₂₄ O ₂	96.8	125.2	139.0	153.8	170.1	180.2	193.8	214.0	235.0	257.4	
Geranyl isobutylate	C ₁₄ H ₂₄ O ₂	90.9	119.6	133.0	147.9	164.0	174.0	187.7	207.6	228.5	251.0	
Geranyl formate	C ₁₁ H ₁₈ O ₂	61.8	90.3	104.3	119.8	136.2	147.2	160.7	182.6	205.8	230.0	
Glutaric acid	C ₅ H ₈ O ₄	155.5	183.8	196.0	210.5	226.3	235.5	247.0	265.0	283.5	303.0	97.5
Glutaric anhydride	C ₅ H ₈ O ₃	100.8	133.3	149.5	166.0	185.5	196.2	212.5	236.5	261.0	287.0	
Glutaronitrile	C ₅ H ₆ N ₂	91.3	123.7	140.0	156.5	176.4	189.5	205.5	230.0	257.3	286.2	
Glutaryl chloride	C ₅ H ₆ Cl ₂ O ₂	56.1	84.0	97.8	112.3	128.3	139.1	151.8	172.4	195.3	217.0	
Glycerol	C ₃ H ₈ O ₃	125.5	153.8	167.2	182.2	198.0	208.0	220.1	240.0	263.0	290.0	17.9
Glycerol dichlorohydrin (1,3-dichloro-2-propanol)	C ₃ H ₆ Cl ₂ O	28.0	52.2	64.7	78.0	93.0	102.0	114.8	133.3	153.5	174.3	
Glycol diacetate	C ₆ H ₁₀ O ₄	38.3	64.1	77.1	90.8	106.1	115.8	128.0	147.8	168.3	190.5	−31
Glycolide (1,4-dioxane-2,6-dione)	C ₄ H ₄ O ₄		103.0	116.6	132.0	148.6	158.2	173.2	194.0	217.0	240.0	97
Guaicol (2-methoxyphenol)	C ₇ H ₈ O ₂	52.4	79.1	92.0	106.0	121.6	131.0	144.0	162.7	184.1	205.0	28.3
Heneicosane	C ₂₁ H ₄₄	152.6	188.0	205.4	223.2	243.4	255.3	272.0	296.5	323.8	350.5	40.4
Heptacosane	C ₂₇ H ₅₆	211.7	248.6	266.8	284.6	305.7	318.3	333.5	359.4	385.0	410.6	59.5
Heptadecane	C ₁₇ H ₃₆	115.0	145.2	160.0	177.7	195.8	207.3	223.0	247.8	274.5	303.0	22.5
Heptaldehyde (enanthaldehyde)	C ₇ H ₁₄ O	12.0	32.7	43.0	54.0	66.3	74.0	84.0	102.0	125.5	155.0	−42
n-Heptane	C ₇ H ₁₆	−34.0	−12.7	−2.1	+9.5	22.3	30.6	41.8	58.7	78.0	98.4	−90.6
Heptanoic acid (enanthic acid)	C ₇ H ₁₄ O ₂	78.0	101.3	113.2	125.6	139.5	148.5	160.0	179.5	199.6	221.5	−10
1-Heptanol	C ₇ H ₁₆ O	42.4	64.3	74.7	85.8	99.8	108.0	119.5	136.6	155.6	175.8	34.6
Heptanoyl chloride (enanthyl chloride)	C ₇ H ₁₃ ClO	34.2	54.6	64.6	75.0	86.4	93.5	102.7	116.3	130.7	145.0	
2-Heptene	C ₇ H ₁₄	−35.8	−14.1	−3.5	+8.3	21.5	30.0	41.3	58.6	78.1	98.5	
Heptylbenzene	C ₁₃ H ₂₀	64.0	94.6	110.0	126.0	144.0	154.8	170.2	193.3	217.8	244.0	
Heptyl cyanide (enanthonitrile)	C ₇ H ₁₃ N	21.0	47.8	61.6	76.3	92.6	103.0	116.8	137.7	160.0	184.6	
Hexachlorobenzene	C ₆ Cl ₆	114.4	149.3	166.4	185.7	206.0	219.0	235.5	258.5	283.5	309.4	230
Hexachloroethane	C ₂ Cl ₆	32.7	49.8	73.5	87.6	102.3	112.0	124.2	143.1	163.8	185.6	186.6
Hexacosane	C ₂₆ H ₅₄	204.0	240.0	257.4	275.8	295.2	307.8	323.2	348.4	374.6	399.8	56.6
Hexadecane	C ₁₆ H ₃₄	105.3	135.2	149.8	164.7	181.3	193.2	208.5	231.7	258.3	287.5	18.5
1-Hexadecene	C ₁₆ H ₃₂	101.6	131.7	146.2	162.0	178.8	190.8	205.3	226.8	250.0	274.0	4
n-Hexadecyl alcohol (cetyl alcohol)	C ₁₆ H ₃₄ O	122.7	158.3	177.8	197.8	219.8	234.3	251.7	280.2	312.7	344.0	49.3

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
<i>n</i> -Hexadecylamine (cetylamine)	C ₁₆ H ₃₅ N	123.6	157.8	176.0	195.7	215.7	228.8	245.8	272.2	300.4	330.0	
Hexaethylbenzene	C ₁₈ H ₃₀		134.3	150.3	168.0	187.7	199.7	216.0	241.7	268.5	293.3	130
<i>n</i> -Hexane	C ₆ H ₁₄	-53.9	-34.5	-25.0	-14.1	-2.3	+5.4	15.8	31.6	49.6	68.7	-95.3
1-Hexanol	C ₆ H ₁₄ O	24.4	47.2	58.2	70.3	83.7	92.0	102.8	119.6	138.0	157.0	-51.6
2-Hexanol	C ₆ H ₁₄ O	14.6	34.8	45.0	55.9	67.9	76.0	87.3	103.7	121.8	139.9	
3-Hexanol	C ₆ H ₁₄ O	+2.5	25.7	36.7	49.0	62.2	70.7	81.8	98.3	117.0	135.5	
1-Hexene	C ₆ H ₁₂	-57.5	-38.0	-28.1	-17.2	-5.0	+2.8	13.0	29.0	46.8	66.0	-98.5
<i>n</i> -Hexyl levulinate	C ₁₁ H ₂₀ O ₃	90.0	120.0	134.7	150.2	167.8	179.0	193.6	215.7	241.0	266.8	
<i>n</i> -Hexyl phenyl ketone (enanthophenone)	C ₁₃ H ₁₈ O	100.0	130.3	145.5	161.0	178.9	189.8	204.2	225.0	248.3	271.3	
Hydrocinnamic acid	C ₉ H ₁₀ O ₂	102.2	133.5	148.7	165.0	183.3	194.0	209.0	230.8	255.0	279.8	48.5
Hydrogen cyanide (hydrocyanic acid)	CHN	-71.0	-55.3	-47.7	-39.7	-30.9	-25.1	-17.8	-5.3	+10.2	25.9	-13.2
Hydroquinone	C ₆ H ₆ O ₂	132.4	153.3	163.5	174.6	192.0	203.0	216.5	238.0	262.5	286.2	170.3
4-Hydroxybenzaldehyde	C ₇ H ₆ O ₂	121.2	153.2	169.7	186.8	206.0	217.5	233.5	256.8	282.6	310.0	115.5
α-Hydroxyisobutyric acid	C ₄ H ₈ O ₃	73.5	98.5	110.5	123.8	138.0	146.4	157.7	175.2	193.8	212.0	79
α-Hydroxybutronitrile	C ₅ H ₉ NO	41.0	65.8	77.8	90.7	104.8	113.9	125.0	142.0	159.8	178.8	
4-Hydroxy-3-methyl-2-butanone	C ₅ H ₁₀ O ₂	44.6	69.3	81.0	94.0	108.2	117.4	129.0	146.5	165.5	185.0	
4-Hydroxy-4-methyl-2-pentanone	C ₆ H ₁₂ O ₂	22.0	46.7	58.8	72.0	86.7	96.0	108.2	126.8	147.5	167.9	-47
3-Hydroxypropionitrile	C ₃ H ₅ NO	58.7	87.8	102.0	117.9	134.1	144.7	157.7	178.0	200.0	221.0	
Indene	C ₉ H ₈	16.4	44.3	58.5	73.9	90.7	100.8	114.7	135.6	157.8	181.6	-2
Iodobenzene	C ₆ H ₅ I	24.1	50.6	64.0	78.3	94.4	105.0	118.3	139.8	163.9	188.6	-28.5
Iodononane	C ₉ H ₁₉ I	70.0	96.2	109.0	123.0	138.1	147.7	159.8	179.0	199.3	219.5	
2-Iodotoluene	C ₇ H ₇ I	37.2	65.9	79.8	95.6	112.4	123.8	138.1	160.0	185.7	211.0	
α-Ionone	C ₁₃ H ₂₀ O	79.5	108.8	123.0	139.0	155.6	166.3	181.2	202.5	225.2	250.0	
Isoprene	C ₅ H ₈	-79.8	-62.3	-53.3	-43.5	-32.6	-25.4	-16.0	-1.2	+15.4	32.6	-146.7
Laureldehyde	C ₁₂ H ₂₄ O	77.7	108.4	123.7	140.2	157.8	168.7	184.5	207.8	231.8	257.0	44.5
Lauric acid	C ₁₂ H ₂₄ O ₂	121.0	150.6	166.0	183.6	201.4	212.7	227.5	249.8	273.8	299.2	48
Levulinlaldehyde	C ₅ H ₈ O ₂	28.1	54.9	68.0	82.7	98.3	108.4	121.8	142.0	164.0	187.0	
Levulinic acid	C ₅ H ₈ O ₃	102.0	128.1	141.8	154.1	169.5	178.0	190.2	208.3	227.4	245.8	33.5
<i>d</i> -Limonene	C ₁₀ H ₁₆	14.0	40.4	53.8	68.2	84.3	94.6	108.3	128.5	151.4	175.0	-96.9
Linalyl acetate	C ₁₂ H ₂₀ O ₂	55.4	82.5	96.0	111.4	127.7	138.1	151.8	173.3	196.2	220.0	
Maleic anhydride	C ₄ H ₂ O ₃	44.0	63.4	78.7	95.0	111.8	122.0	135.8	155.9	179.5	202.0	58
Menthane	C ₁₀ H ₂₀	+9.7	35.7	48.3	62.7	78.3	88.6	102.1	122.7	146.0	169.5	
1-Menthol	C ₁₀ H ₂₀ O	56.0	83.2	96.0	110.3	126.1	136.1	149.4	168.3	190.2	212.0	42.5
Menthyl acetate	C ₁₂ H ₂₂ O ₂	57.4	85.8	100.0	115.4	132.1	143.2	156.7	178.8	202.8	227.0	
benzoate	C ₁₇ H ₂₄ O ₂	123.2	154.2	170.0	186.3	204.3	215.8	230.4	253.2	277.1	301.0	54.5
formate	C ₁₁ H ₂₀ O ₂	47.3	75.8	90.0	105.8	123.0	133.8	148.0	169.8	194.2	219.0	
Mesityl oxide	C ₆ H ₆ O	-8.7	+14.1	26.0	37.9	51.7	60.4	72.1	90.0	109.8	130.0	-59
Methacrylic acid	C ₄ H ₆ O ₂	25.5	48.5	60.0	72.7	86.4	95.3	106.6	123.9	142.5	161.0	15
Methacrylonitrile	C ₄ H ₅ N	-44.5	-23.3	-12.5	-0.6	+12.8	21.5	32.8	50.0	70.3	90.3	
Methane	CH ₄	-205.9	-199.0	-195.5	-191.8	-187.7	-185.1	-181.4	-175.5	-168.8	-161.5	-182.5
Methanethiol	CH ₃ S	-90.7	-75.3	-67.5	-58.8	-49.2	-43.1	-34.8	-22.1	-7.9	+6.8	-121
Methoxyacetic acid	C ₃ H ₆ O ₃	52.5	79.3	92.0	106.5	122.0	131.8	144.5	163.5	184.2	204.0	
<i>N</i> -Methylacetanilide	C ₉ H ₁₁ NO		103.8	118.6	135.1	152.2	164.2	179.8	202.3	227.4	253.0	102
Methyl acetate	C ₃ H ₆ O ₂	-57.2	-38.6	-29.3	-19.1	-7.9	-0.5	+9.4	24.0	40.0	57.8	-98.7
acetylene (propyne)	C ₃ H ₄	-111.0	-97.5	-90.5	-82.9	-74.3	-68.8	-61.3	-49.8	-37.2	-23.3	-102.7
acrylate	C ₃ H ₄ O ₂	-43.7	-23.6	-13.5	-2.7	+9.2	17.3	28.0	43.9	61.8	80.2	
alcohol (methanol)	CH ₃ O	-44.0	-25.3	-16.2	-6.0	+5.0	12.1	21.2	34.8	49.9	64.7	-97.8
Methylamine	CH ₃ N	-95.8	-81.3	-73.8	-65.9	-56.9	-51.3	-43.7	-32.4	-19.7	-6.3	-93.5
<i>N</i> -Methylaniline	C ₇ H ₉ N	36.0	-Methyl- 81.3	76.2	90.5	106.0	115.8	129.8	149.3	172.0	195.5	-57
Methyl anthranilate	C ₈ H ₉ NO ₂	77.6	109.0	124.2	141.5	159.7	172.0	187.8	212.4	238.5	266.5	24
benzoate	C ₈ H ₇ O ₂	39.0	64.4	77.3	91.8	107.8	117.4	130.8	151.4	174.7	199.5	-12.5
2-Methylbenzothiazole	C ₈ H ₇ NS	70.0	97.5	111.2	125.5	141.2	150.4	163.9	183.2	204.5	225.5	15.4
α-Methylbenzyl alcohol	C ₈ H ₁₀ O	49.0	75.2	88.0	102.1	117.8	127.4	140.3	159.0	180.7	204.0	
Methyl bromide	CH ₃ Br	-96.3	-80.6	-72.8	-64.0	-54.2	-48.0	-39.4	-26.5	-11.9	+3.6	-93
2-Methyl-1-butene	C ₅ H ₁₀	-89.1	-72.8	-64.3	-54.8	-44.1	-37.3	-28.0	-13.8	+2.5	20.2	-135
2-Methyl-2-butene	C ₅ H ₁₀	-75.4	-57.0	-47.9	-37.9	-26.7	-19.4	-9.9	+4.9	21.6	38.5	-133
Methyl isobutyl carbinol (2-methyl-4-pentanol)	C ₆ H ₁₄ O	-0.3	+22.1	33.3	45.4	58.2	67.0	78.0	94.9	113.5	131.7	
<i>n</i> -butyl ketone (2-hexanone)	C ₆ H ₁₂ O	+7.7	28.8	38.8	50.0	62.0	69.8	79.8	94.3	111.0	127.5	-56.9
isobutyl ketone (4-methyl-2-pentanone)	C ₆ H ₁₂ O	-1.4	+19.7	30.0	40.8	52.8	60.4	70.4	85.6	102.0	119.0	-84.7
<i>n</i> -butyrate	C ₅ H ₁₀ O ₂	-26.8	-5.5	+5.0	16.7	29.6	37.4	48.0	64.3	83.1	102.3	
isobutyrate	C ₅ H ₁₀ O ₂	-34.1	-13.0	-2.9	+8.4	21.0	28.9	39.6	55.7	73.6	92.6	-84.7
caprate	C ₁₁ H ₂₂ O ₂	63.7	93.5	108.0	123.0	139.0	148.6	161.5	181.6	202.9	224.0	-18
caproate	C ₇ H ₁₄ O ₂	+5.0	30.0	42.0	55.4	70.0	79.7	91.4	109.8	129.8	150	
caprylate	C ₉ H ₁₈ O ₂	34.2	61.7	74.9	89.0	105.3	115.3	128.0	148.1	170.0	193.0	-40
chloride	CH ₃ Cl		-99.5	-92.4	-84.8	-76.0	-70.4	-63.0	-51.2	-38.0	-24.0	-97.7
chloroacetate	C ₃ H ₅ ClO ₂	-2.9	19.0	30.0	41.5	54.5	63.0	73.5	90.5	109.5	130.3	-31.9
cinnamate	C ₁₀ H ₁₀ O ₂	77.4	108.1	123.0	140.0	157.9	170.0	185.8	209.6	235.0	263.0	33.4
α-Methylcinnamic acid	C ₁₀ H ₁₀ O ₂	125.7	155.0	169.8	185.2	201.8	212.0	224.8	245.0	266.8	288.0	
Methylcyclohexane	C ₇ H ₁₄	-35.9	-14.0	-3.2	+8.7	22.0	30.5	42.1	59.6	79.6	100.9	-126.4
Methylcyclopentane	C ₆ H ₁₂	-53.7	-33.8	-23.7	-12.8	-0.6	+7.2	17.9	34.0	52.3	71.8	-142.4
Methylcyclopropane	C ₄ H ₈	-96.0	-80.6	-72.8	-64.0	-54.2	-48.0	-39.3	-26.0	-11.3	+4.5	
Methyl <i>n</i> -decyl ketone (<i>n</i> -dodecan-2-one)	C ₁₂ H ₂₄ O	77.1	106.0	120.4	136.0	152.4	163.8	177.5	199.0	222.5	246.5	
dichloroacetate	C ₃ H ₄ Cl ₂ O ₂	3.2	26.7	38.1	50.7	64.7	73.6	85.4	103.2	122.6	143.0	
<i>N</i> -Methyldiphenylamine	C ₁₃ H ₁₃ N	103.5	134.0	149.7	165.8	184.0	195.4	210.1	232.8	257.0	282.0	-7.6

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm* (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
Methyl <i>n</i> -dodecyl ketone (2-tetradecanone)	C ₁₄ H ₂₈ O	99.3	130.0	145.5	161.3	179.8	191.4	206.0	228.2	253.3	278.0	
Methylene bromide (dibromomethane)	CH ₂ Br ₂	-35.1	-13.2	-2.4	+9.7	23.3	31.6	42.3	58.5	79.0	98.6	-52.8
chloride (dichloromethane)	CH ₂ Cl ₂	-70.0	-52.1	-43.3	-33.4	-22.3	-15.7	-6.3	+8.0	24.1	40.7	-96.7
Methyl ethyl ketone (2-butanone)	C ₄ H ₈ O	-48.3	-28.0	-17.7	-6.5	+6.0	14.0	25.0	41.6	60.0	79.6	-85.9
2-Methyl-3-ethylpentane	C ₈ H ₁₈	-24.0	-1.8	+9.5	21.7	35.2	43.9	55.7	73.6	94.0	115.6	-114.5
3-Methyl-3-ethylpentane	C ₈ H ₁₈	-23.9	-1.4	+9.9	22.3	36.2	45.0	57.1	75.3	96.2	118.3	-90
Methyl fluoride	CH ₃ F	-147.3	-137.0	-131.6	-125.9	-119.1	-115.0	-109.0	-99.9	-89.5	-78.2	
formate	C ₂ H ₄ O ₂	-74.2	-57.0	-48.6	-39.2	-28.7	-21.9	-12.9	+0.8	16.0	32.0	-99.8
α-Methylglutaric anhydride	C ₆ H ₈ O ₃	93.8	125.4	141.8	157.7	177.5	189.9	205.0	229.1	255.5	282.5	
Methyl glycolate	C ₃ H ₆ O ₃	+9.6	33.7	45.3	58.1	72.3	81.8	93.7	111.8	131.7	151.5	
2-Methylheptadecane	C ₁₅ H ₃₂	119.8	152.0	168.7	186.0	204.8	216.3	231.5	254.5	279.8	306.5	
2-Methylheptane	C ₈ H ₁₈	-21.0	+1.3	12.3	24.4	37.9	46.6	58.3	76.0	96.2	117.6	-109.5
3-Methylheptane	C ₈ H ₁₈	-19.8	+2.6	13.3	25.4	38.9	47.6	59.4	77.1	97.4	118.9	-120.8
4-Methylheptane	C ₈ H ₁₈	-20.4	+1.5	12.4	24.5	38.0	46.6	58.3	76.1	96.3	117.7	-121.1
2-Methyl-2-heptene	C ₈ H ₁₆	-16.1	+6.7	17.8	30.4	44.0	52.8	64.6	82.3	102.2	122.5	
6-Methyl-3-hepten-2-ol	C ₈ H ₁₆ O	41.6	65.0	76.7	89.3	102.7	111.5	122.6	139.5	156.6	175.5	
6-Methyl-5-hepten-2-ol	C ₈ H ₁₆ O	41.9	66.0	77.8	90.4	104.0	112.8	123.8	140.0	156.6	174.3	
2-Methylhexane	C ₇ H ₁₆	-40.4	-19.5	-9.1	+2.3	14.9	23.0	34.1	50.8	69.8	90.0	-118.2
3-Methylhexane	C ₇ H ₁₆	-39.0	-18.1	-7.8	+3.6	16.4	24.5	35.6	52.4	71.6	91.9	
Methyl iodide	CH ₃ I		-55.0	-45.8	-35.6	-24.2	-16.9	-7.0	+8.0	25.3	42.4	-64.4
laurate	C ₁₃ H ₂₆ O ₂	87.8	117.9	133.2	149.0	166.0	176.8	190.8				5
levulinate	C ₆ H ₁₀ O ₃	39.8	66.4	79.7	93.7	109.5	119.3	133.0	153.4	175.8	197.7	
methacrylate	C ₅ H ₈ O ₂	-30.5	-10.0	+1.0	11.0	25.5	34.5	47.0	63.0	82.0	101.0	
myristate	C ₁₅ H ₃₀ O ₂	115.0	145.7	160.8	177.8	195.8	207.5	222.6	245.3	269.8	295.8	18.5
α-naphthyl ketone (1-acetonaphthone)	C ₁₂ H ₁₀ O	115.6	146.3	161.5	178.4	196.8	208.6	223.8	246.7	270.5	295.5	
β-naphthyl ketone (2-acetonaphthone)	C ₁₂ H ₁₀ O	120.2	152.3	168.5	185.7	203.8	214.7	229.8	251.6	275.8	301.0	55.5
<i>n</i> -nonyl ketone (undecan-2-one)	C ₁₁ H ₂₂ O	68.2	95.5	108.9	123.1	139.0	148.6	161.0	181.2	202.3	224.0	15
palmitate	C ₁₇ H ₃₄ O ₂	134.3	166.8	184.3	202.0							30
<i>n</i> -pentadecyl ketone (2-heptadecanone)	C ₁₇ H ₃₄ O	129.6	161.6	178.0	196.4	214.3	226.7	242.0	265.8	291.7	319.5	
2-Methylpentane	C ₆ H ₁₄	-60.9	-41.7	-32.1	-21.4	-9.7	-1.9	+8.1	24.1	41.6	60.3	-154
3-Methylpentane	C ₆ H ₁₄	-59.0	-39.8	-30.1	-19.4	-7.3	+0.1	10.5	26.5	44.2	63.3	-118
2-Methyl-1-pentanol	C ₆ H ₁₄ O	15.4	38.0	49.6	61.6	74.7	83.4	94.2	111.3	129.8	147.9	
2-Methyl-2-pentanol	C ₆ H ₁₄ O	-4.5	+16.8	27.6	38.8	51.3	58.8	69.2	85.0	102.6	121.2	-103
Methyl <i>n</i> -pentyl ketone (2-heptanone)	C ₇ H ₁₄ O	19.3	43.6	55.5	67.7	81.2	89.8	100.0	116.1	133.2	150.2	
phenyl ether (anisole)	C ₇ H ₈ O	+5.4	30.0	42.2	55.8	70.7	80.1	93.0	112.3	133.8	155.5	-37.3
2-Methylpropene	C ₄ H ₈	-105.1	-96.5	-81.9	-73.4	-63.8	-57.7	-49.3	-36.7	-22.2	-6.9	-140.3
Methyl propionate	C ₄ H ₈ O ₂	-42.0	-21.5	-11.8	-1.0	+11.0	18.7	29.0	44.2	61.8	79.8	-87.5
4-Methylpropiofenone	C ₁₀ H ₁₂ O	59.6	89.3	103.8	120.2	138.0	149.3	164.2	187.4	212.7	238.5	
2-Methylpropionyl bromide	C ₄ H ₇ BrO	13.5	38.4	50.6	64.1	79.4	88.8	101.6	120.5	141.7	163.0	
Methyl propyl ether	C ₄ H ₁₀ O	-72.2	-54.3	-45.4	-35.4	-24.3	-17.4	-8.1	+6.0	22.5	39.1	
<i>n</i> -propyl ketone (2-pentanone)	C ₅ H ₁₀ O	-12.0	+8.0	17.9	28.5	39.8	47.3	56.8	71.0	86.8	103.3	-77.8
isopropyl ketone (3-Methyl-2-butanone)	C ₅ H ₁₀ O	-19.9	-1.0	+8.3	18.3	29.6	36.2	45.5	59.0	73.8	88.9	-92
2-Methylquinoline	C ₁₀ H ₉ N	75.3	104.0	119.0	134.0	150.8	161.7	176.2	197.8	211.7	246.5	-1
Methyl salicylate	C ₈ H ₈ O ₃	54.0	81.6	95.3	110.0	126.2	136.7	150.0	172.6	197.5	223.2	-8.3
α-Methyl styrene	C ₉ H ₁₀	7.4	34.0	47.1	61.8	77.8	88.3	102.2	121.8	143.0	165.4	-23.2
4-Methyl styrene	C ₉ H ₁₀	16.0	42.0	55.1	69.2	85.0	95.0	108.6	128.7	151.2	175.0	
Methyl <i>n</i> -tetradecyl ketone (2-hexadecanone)	C ₁₆ H ₃₂ O	109.8	151.5	167.3	184.6	203.7	215.0	230.5	254.4	279.8	307.0	
thiocyanate	C ₂ H ₃ NS	-14.0	+9.8	21.6	34.5	49.0	58.1	70.4	89.8	110.8	132.9	-51
isothiocyanate	C ₂ H ₃ NS	-34.7	-8.3	+5.4	20.4	38.2	47.5	59.3	77.5	97.8	119.0	35.5
undecyl ketone (2-tridecanone)	C ₁₃ H ₂₆ O	86.8	117.0	131.8	147.8	165.7	176.6	191.5	214.0	238.3	262.5	28.5
isovalerate	C ₆ H ₁₂ O ₂	-19.2	+2.9	14.0	26.4	39.8	48.2	59.8	77.3	96.7	116.7	
Monovinylacetylene (butenyne)	C ₄ H ₄	-93.2	-77.7	-70.0	-61.3	-51.7	-45.3	-37.1	-24.1	-10.1	+5.3	
Myrcene	C ₁₀ H ₁₆	14.5	40.0	53.2	67.0	82.6	92.6	106.0	126.0	148.3	171.5	
Myristaldehyde	C ₁₄ H ₂₆ O	99.0	132.0	148.3	166.2	186.0	198.3	214.5	240.4	267.9	297.8	23.5
Myristic acid (tetradecanoic acid)	C ₁₄ H ₂₈ O ₂	142.0	174.1	190.8	207.6	223.5	237.2	250.5	272.3	294.6	318.0	57.5
Naphthalene	C ₁₀ H ₈	52.6	74.2	85.8	101.7	119.3	130.2	145.5	167.7	193.2	217.9	80.2
1-Naphthoic acid	C ₁₁ H ₈ O ₂	156.0	184.0	196.8	211.2	225.0	234.5	245.8	263.5	281.4	300.0	160.5
2-Naphthoic acid	C ₁₁ H ₈ O ₂	160.8	189.7	202.8	216.9	231.5	241.3	252.7	270.3	289.5	308.5	184
1-Naphthol	C ₁₀ H ₈ O	94.0	125.5	142.0	158.0	177.8	190.0	206.0	229.6	255.8	282.5	96
2-Naphthol	C ₁₀ H ₈ O	128.6	145.5	161.8	181.7	193.7	209.8	234.0	260.6	288.0	312.5	122.5
1-Naphthylamine	C ₁₀ H ₉ N	104.3	137.7	153.8	171.6	191.5	203.8	220.0	244.9	272.2	300.8	50
2-Naphthylamine	C ₁₀ H ₉ N	108.0	141.6	157.6	175.8	195.7	208.1	224.3	249.7	277.4	306.1	111.5
Nicotine	C ₁₀ H ₁₄ N ₂	61.8	91.8	107.2	123.7	142.1	154.7	169.5	193.8	219.8	247.3	
2-Nitroaniline	C ₆ H ₆ N ₂ O ₂	104.0	135.7	150.4	167.7	186.0	197.8	213.0	236.3	260.0	284.5	71.5
3-Nitroaniline	C ₆ H ₆ N ₂ O ₂	119.3	151.5	167.8	185.5	204.2	216.5	232.1	255.3	280.2	305.7	114
4-Nitroaniline	C ₆ H ₆ N ₂ O ₂	142.4	177.6	194.4	213.2	234.2	245.9	261.8	284.5	310.2	336.0	146.5
2-Nitrobenzaldehyde	C ₇ H ₅ NO ₃	85.8	117.7	133.4	150.0	168.8	180.7	196.2	220.0	246.8	273.5	40.9
3-Nitrobenzaldehyde	C ₇ H ₅ NO ₃	96.2	127.4	142.8	159.0	177.7	189.5	204.3	227.4	252.1	278.3	58
Nitrobenzene	C ₆ H ₅ NO ₂	44.4	71.6	84.9	99.3	115.4	125.8	139.9	161.2	185.8	210.6	+57.7
Nitroethane	C ₂ H ₅ NO ₂	-21.0	+1.5	12.5	24.8	38.0	46.5	57.8	74.8	94.0	114.0	-90
Nitroglycerin	C ₃ H ₅ N ₃ O ₉	127	167	188	210	235	251					11
Nitromethane	CH ₃ NO ₂	-29.0	-7.9	+2.8	14.1	27.5	35.5	46.6	63.5	82.0	101.2	-29
2-Nitrophenol	C ₆ H ₅ NO ₃	49.3	76.8	90.4	105.8	122.1	132.6	146.4	167.6	191.0	214.5	45
2-Nitrophenyl acetate	C ₈ H ₇ NO ₄	100.0	128.0	142.0	155.8	172.8	181.7	194.1	213.0	233.5	253.0	

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
1-Nitropropane	C ₃ H ₇ NO ₂	-9.6	+13.5	25.3	37.9	51.8	60.5	72.3	90.2	110.6	131.6	-108
2-Nitropropane	C ₃ H ₇ NO ₂	-18.8	+4.1	15.8	28.2	41.8	50.3	62.0	80.0	99.8	120.3	-93
2-Nitrotoluene	C ₇ H ₇ NO ₂	50.0	79.1	93.8	109.6	126.3	137.6	151.5	173.7	197.7	222.3	-4.1
3-Nitrotoluene	C ₇ H ₇ NO ₂	50.2	81.0	96.0	112.8	130.7	142.5	156.9	180.3	206.8	231.9	15.5
4-Nitrotoluene	C ₇ H ₇ NO ₂	53.7	85.0	100.5	117.7	136.0	147.9	163.0	186.7	212.5	238.3	51.9
4-Nitro-1,3-xylene (4-nitro- <i>m</i> -xylene)	C ₈ H ₉ NO ₂	65.6	95.0	109.8	125.8	143.3	153.8	168.5	191.7	217.5	244.0	+2
Nonacosane	C ₂₉ H ₆₀	234.2	269.8	286.4	303.6	323.2	334.8	350.0	373.2	397.2	421.8	63.8
Nonadecane	C ₁₉ H ₄₀	133.2	166.3	183.5	200.8	220.0	232.8	248.0	271.8	299.8	330.0	32
<i>n</i> -Nonane	C ₉ H ₂₀	+1.4	25.8	38.0	51.2	66.0	75.5	88.1	107.5	128.2	150.8	-53.
1-Nonanol	C ₉ H ₂₀ O	59.5	86.1	99.7	113.8	129.0	139.0	151.3	170.5	192.1	213.5	-5
2-Nonanone	C ₉ H ₁₈ O	32.1	59.0	72.3	87.2	103.4	113.8	127.4	148.2	171.2	195.0	-19
Octacosane	C ₂₈ H ₅₈	226.5	260.3	277.4	295.4	314.2	326.8	341.8	364.8	388.9	412.5	61.6
Octadecane	C ₁₈ H ₃₈	119.6	152.1	169.6	187.5	207.4	219.7	236.0	260.6	288.0	317.0	28
<i>n</i> -Octane	C ₈ H ₁₈	-14.0	+8.3	19.2	31.5	45.1	53.8	65.7	83.6	104.0	125.6	-56.8
<i>n</i> -Octanol (1-octanol)	C ₈ H ₁₈ O	54.0	76.5	88.3	101.0	115.2	123.8	135.2	152.0	173.8	195.2	-15.4
2-Octanone	C ₈ H ₁₆ O	23.6	48.4	60.9	74.3	89.8	99.0	111.7	130.4	151.0	172.9	-16
<i>n</i> -Octyl acrylate	C ₁₁ H ₂₀ O ₂	58.5	87.7	102.0	117.8	135.6	145.6	159.1	180.2	204.0	227.0	
iodide (1-Iodooctane)	C ₈ H ₁₇ I	45.8	74.8	90.0	105.9	123.8	135.4	150.0	173.3	199.3	225.5	-45.9
Oleic acid	C ₁₈ H ₃₄ O ₂	176.5	208.5	223.0	240.0	257.2	269.8	286.0	309.8	334.7	360.0	14
Palmitaldehyde	C ₁₆ H ₃₂ O	121.6	154.6	171.8	190.0	210.0	222.6	239.5	264.1	292.3	321.0	34
Palmitic acid	C ₁₆ H ₃₂ O ₂	153.6	188.1	205.8	223.8	244.4	256.0	271.5	298.7	326.0	353.8	64.0
Palmitonitrile	C ₁₆ H ₃₁ N	134.3	168.3	185.8	204.2	223.8	236.6	251.5	277.1	304.5	332.0	31
Pelargonic acid	C ₉ H ₁₈ O ₂	108.2	126.0	137.4	149.8	163.7	172.3	184.4	203.1	227.5	253.5	12.5
Pentachlorobenzene	C ₅ HCl ₅	98.6	129.7	144.3	160.0	178.5	190.1	205.5	227.0	251.6	276.0	85.5
Pentachloroethane	C ₂ HCl ₅	+1.0	27.2	39.8	53.9	69.9	80.0	93.5	114.0	137.2	160.5	-22
Pentachloroethylbenzene	C ₈ H ₅ Cl ₅	96.2	130.0	148.0	166.0	186.2	199.0	216.0	241.8	269.3	299.0	
Pentachlorophenol	C ₆ HCl ₅ O				192.2	211.2	223.4	239.6	261.8	285.0	309.3	188.5
Pentacosane	C ₂₅ H ₅₂	194.2	230.0	248.2	266.1	285.6	298.4	314.0	339.0	365.4	390.3	53.3
Pentadecane	C ₁₅ H ₃₂	91.6	121.0	135.4	150.2	167.7	178.4	194.0	216.1	242.8	270.5	10
1,3-Pentadiene	C ₅ H ₈	-71.8	-53.8	-45.0	-34.8	-23.4	-16.5	-6.7	+8.0	24.7	42.1	
1,4-Pentadiene	C ₅ H ₈	-83.5	-66.2	-57.1	-47.7	-37.0	-30.0	-20.6	-6.7	+8.3	26.1	
Pentaethylbenzene	C ₁₆ H ₂₆	86.0	120.0	135.8	152.4	171.9	184.2	200.0	224.1	250.2	277.0	
Pentaethylchlorobenzene	C ₁₆ H ₂₅ Cl	90.0	123.8	140.7	158.1	178.2	191.0	208.0	230.3	257.2	285.0	
<i>n</i> -Pentane	C ₅ H ₁₂	-76.6	-62.5	-50.1	-40.2	-29.2	-22.2	-12.6	+1.9	18.5	36.1	-129.7
iso-Pentane (2-methylbutane)	C ₅ H ₁₂	-82.9	-65.8	-57.0	-47.3	-36.5	-29.6	-20.2	-5.9	+10.5	27.8	-159.7
neo-Pentane (2,2-dimethylpropane)	C ₅ H ₁₂	-102.0	-85.4	-76.7	-67.2	-56.1	-49.0	-39.1	-23.7	-7.1	+9.5	-16.6
2,3,4-Pentanetriol	C ₅ H ₁₂ O ₃	155.0	189.3	204.5	220.5	239.6	249.8	263.5	284.5	307.0	327.2	
1-Pentene	C ₅ H ₁₀	-80.4	-63.3	-54.5	-46.0	-34.1	-27.1	-17.7	-3.4	+12.8	30.1	
α-Phellandrene	C ₁₀ H ₁₆	20.0	45.7	58.0	72.1	87.8	97.6	110.6	130.6	152.0	175.0	
Phenanthrene	C ₁₄ H ₁₀	118.2	154.3	173.0	193.7	215.8	229.9	249.0	277.1	308.0	340.2	99.5
Phenethyl alcohol (phenyl cellosolve)	C ₈ H ₁₀ O ₂	58.2	85.9	100.0	114.8	130.5	141.2	154.0	175.0	197.5	219.5	
2-Phenetidine	C ₈ H ₁₁ NO	67.0	94.7	108.6	123.7	139.9	149.8	163.5	184.0	207.0	228.0	
Phenol	C ₆ H ₆ O	40.1	62.5	73.8	86.0	100.1	108.4	121.4	139.0	160.0	181.9	40.6
2-Phenoxyethanol	C ₈ H ₁₀ O ₂	78.0	106.6	121.2	136.0	152.2	163.2	176.5	197.6	221.0	245.3	11.6
2-Phenoxyethyl acetate	C ₁₀ H ₁₂ O ₃	82.6	113.5	128.0	144.5	162.3	174.0	189.2	211.3	235.0	259.7	-6.7
Phenyl acetate	C ₈ H ₈ O ₂	38.2	64.8	78.0	92.3	108.1	118.1	131.6	151.2	173.5	195.9	
Phenylacetic acid	C ₈ H ₈ O ₂	97.0	127.0	141.3	156.0	173.6	184.5	198.2	219.5	243.0	265.5	76.5
Phenylacetoneitrile	C ₈ H ₇ N	60.0	89.0	103.5	119.4	136.3	147.7	161.8	184.2	208.5	233.5	-23.8
Phenylacetyl chloride	C ₈ H ₇ ClO	48.0	75.3	89.0	103.6	119.8	129.8	143.5	163.8	186.0	210.0	
Phenyl benzoate	C ₁₃ H ₁₀ O ₂	106.8	141.5	157.8	177.0	197.6	210.8	227.8	254.0	283.5	314.0	70.5
4-Phenyl-3-buten-2-one	C ₁₀ H ₁₀ O	81.7	112.2	127.4	143.8	161.3	172.6	187.8	211.0	235.4	261.0	41.5
Phenyl isocyanate	C ₇ H ₅ NO	10.6	36.0	48.5	62.5	77.7	87.7	100.6	120.8	142.7	165.6	
isocyanide	C ₇ H ₅ N	12.0	37.0	49.7	63.4	78.3	88.0	101.0	120.8	142.3	165.0	
Phenylcyclohexane	C ₁₂ H ₁₆	67.5	96.5	111.3	126.4	144.0	154.2	169.3	191.3	214.6	240.0	+7.5
Phenyl dichlorophosphate	C ₆ H ₅ Cl ₂ O ₂ P	66.7	95.9	110.0	125.9	143.4	153.6	168.0	189.8	213.0	239.5	
<i>m</i> -Phenylene diamine												
(1,3-phenylenediamine)	C ₆ H ₈ N ₂	99.8	131.2	147.0	163.8	182.5	194.0	209.9	233.0	259.0	285.5	62.8
Phenylglyoxal	C ₈ H ₆ O ₃		75.0	87.8	100.7	115.5	124.2	136.2	153.8	173.5	193.5	73
Phenylhydrazine	C ₈ H ₈ N ₂	71.8	101.6	115.8	131.5	148.2	158.7	173.5	195.4	218.2	243.5	19.5
<i>N</i> -Phenyliminodiethanol	C ₁₀ H ₁₅ NO ₂	145.0	179.2	195.8	213.4	233.0	245.3	260.6	284.5	311.3	337.8	
1-Phenyl-1,3-pentanedione	C ₁₁ H ₁₂ O ₂	98.0	128.5	144.0	159.9	178.0	189.8	204.5	226.7	251.2	276.5	
2-Phenylphenol	C ₁₂ H ₁₀ O	100.0	131.6	146.2	163.3	180.3	192.2	205.9	227.9	251.8	275.0	56.5
4-Phenylphenol	C ₁₂ H ₁₀ O		176.2	193.8	213.0	225.3	240.9	263.2	285.5	308.0	364.5	164.5
3-Phenyl-1-propanol	C ₉ H ₁₂ O	74.7	102.4	116.0	131.2	147.4	156.8	170.3	191.2	212.8	235.0	
Phenyl isothiocyanate	C ₇ H ₅ NS	47.2	75.6	89.8	115.5	122.5	133.3	147.7	169.6	194.0	218.5	-21.0
Phorone	C ₉ H ₁₄ O	42.0	68.3	81.5	95.6	111.3	121.4	134.0	153.5	175.3	197.2	28
iso-Phorone	C ₉ H ₁₄ O	38.0	66.7	81.2	96.8	114.5	125.6	140.6	163.3	188.7	215.2	
Phosgene (carbonyl chloride)	CCl ₂ O	-92.9	-77.0	-69.3	-60.3	-50.3	-44.0	-35.6	-22.3	-7.6	+8.3	-104
Phthalic anhydride	C ₈ H ₄ O ₃	96.5	121.3	134.0	151.7	172.0	185.3	202.3	228.0	256.8	284.5	130.8
Phthalide	C ₈ H ₆ O ₃	95.5	127.7	144.0	161.3	181.0	193.5	210.0	234.5	261.8	290.0	73
Phthaloyl chloride	C ₈ H ₄ Cl ₂ O ₂	86.3	118.3	134.2	151.0	170.0	182.2	197.8	222.0	248.3	275.8	88.5
2-Picoline	C ₈ H ₇ N	-11.1	+12.6	24.4	37.4	51.2	59.9	71.4	89.0	108.4	128.8	-70
Pimelic acid	C ₇ H ₁₂ O ₄	163.4	196.2	212.0	229.3	247.0	258.2	272.0	294.5	318.5	342.1	103
α-Pinene	C ₁₀ H ₁₆	-1.0	+24.6	37.3	51.4	66.8	76.8	90.1	110.2	132.3	155.0	-55
β-Pinene	C ₁₀ H ₁₆	+4.2	30.0	42.3	58.1	71.5	81.2	94.0	114.1	136.1	158.3	

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg									Melting point, °C	
		1	5	10	20	40	60	100	200	400		760
Name	Formula	Temperature, °C										
Piperidine	C ₅ H ₁₁ N		-7.0	+3.9	15.8	29.2	37.7	49.0	66.2	85.7	106.0	-9
Piperonal	C ₈ H ₆ O ₃	87.0	117.4	132.0	148.0	165.7	177.0	191.7	214.3	238.5	263.0	37
Propane	C ₃ H ₈	-128.9	-115.4	-108.5	-100.9	-92.4	-87.0	-79.6	-68.4	-55.6	-42.1	-187.1
Propenylbenzene	C ₉ H ₁₀	17.5	43.8	57.0	71.5	87.7	97.8	111.7	132.0	154.7	179.0	-30.1
Propionamide	C ₃ H ₇ NO	65.0	91.0	105.0	119.0	134.8	144.3	156.0	174.2	194.0	213.0	79
Propionic acid	C ₃ H ₆ O ₂	4.6	28.0	39.7	52.0	65.8	74.1	85.8	102.5	122.0	141.1	-22
anhydride	C ₆ H ₁₀ O ₃	20.6	45.3	57.7	70.4	85.6	94.5	107.2	127.8	146.0	167.0	-45
Propionitrile	C ₃ H ₅ N	-35.0	-13.6	-3.0	+8.8	22.0	30.1	41.4	58.2	77.7	97.1	-91.9
Propiophenone	C ₉ H ₁₀ O	50.0	77.9	92.2	107.6	124.3	135.0	149.3	170.2	194.2	218.0	21
<i>n</i> -Propyl acetate	C ₅ H ₁₀ O ₂	-26.7	-5.4	+5.0	16.0	28.8	37.0	47.8	64.0	82.0	101.8	-92.5
iso-Propyl acetate	C ₅ H ₁₀ O ₂	-38.3	-17.4	-7.2	+4.2	17.0	25.1	35.7	51.7	69.8	89.0	
<i>n</i> -Propyl alcohol (1-propanol)	C ₃ H ₈ O	-15.0	+5.0	14.7	25.3	36.4	43.5	52.8	66.8	82.0	97.8	-127
iso-Propyl alcohol (2-propanol)	C ₃ H ₈ O	-26.1	-7.0	+2.4	12.7	23.8	30.5	39.5	53.0	67.8	82.5	-85.8
<i>n</i> -Propylamine	C ₃ H ₉ N	-64.4	-46.3	-37.2	-27.1	-16.0	-9.0	+0.5	15.0	31.5	48.5	-83
Propylbenzene	C ₉ H ₁₂	6.3	31.3	43.4	56.8	71.6	81.1	94.0	113.5	135.7	159.2	-99.5
Propyl benzoate	C ₁₀ H ₁₂ O ₂	54.6	83.8	98.0	114.3	131.8	143.3	157.4	180.1	205.2	231.0	-51.6
<i>n</i> -Propyl bromide (1-bromopropane)	C ₃ H ₇ Br	-53.0	-33.4	-23.3	-12.4	-0.3	+7.5	18.0	34.0	52.0	71.0	-109.9
iso-Propyl bromide (2-bromopropane)	C ₃ H ₇ Br	-61.8	-42.5	-32.8	-22.0	-10.1	-2.5	+8.0	23.8	41.5	60.0	-89.0
<i>n</i> -Propyl <i>n</i> -butyrate	C ₇ H ₁₄ O ₂	-1.6	+22.1	34.0	47.0	61.5	70.3	82.6	101.0	121.7	142.7	-95.2
isobutyrate	C ₇ H ₁₄ O ₂	-6.2	+16.8	28.3	40.6	54.3	63.0	73.9	91.8	112.0	133.9	
iso-Propyl isobutyrate	C ₇ H ₁₄ O ₂	-16.3	+5.8	17.0	29.0	42.4	51.4	62.3	80.2	100.0	120.5	
Propyl carbamate	C ₄ H ₉ NO ₂	52.4	77.6	90.0	103.2	117.7	126.5	138.3	155.8	175.8	195.0	
<i>n</i> -Propyl chloride (1-chloropropane)	C ₃ H ₇ Cl	-68.3	-50.0	-41.0	-31.0	-19.5	-12.1	-2.5	+12.2	29.4	46.4	-122.8
iso-Propyl chloride (2-chloropropane)	C ₃ H ₇ Cl	-78.8	-61.1	-52.0	-42.0	-31.0	-23.5	-13.7	+1.3	18.1	36.5	-117
iso-Propyl chloroacetate	C ₅ H ₉ ClO ₂	+3.8	28.1	40.2	53.9	68.7	78.0	90.3	108.8	128.0	148.6	
Propyl chloroglyoxylate	C ₅ H ₇ ClO ₃	9.7	32.3	43.5	55.6	68.8	77.2	88.0	104.7	123.0	150.0	
Propylene	C ₃ H ₆	-131.9	-120.7	-112.1	-104.7	-96.5	-91.3	-84.1	-73.3	-60.9	-47.7	-185
Propylene glycol (1,2-Propanediol)	C ₃ H ₈ O ₂	45.5	70.8	83.2	96.4	111.2	119.9	132.0	149.7	168.1	188.2	
Propylene oxide	C ₃ H ₆ O	-75.0	-57.8	-49.0	-39.3	-28.4	-21.3	-12.0	+2.1	17.8	34.5	-112.1
<i>n</i> -Propyl formate	C ₄ H ₈ O ₂	-43.0	-22.7	-12.6	-1.7	+10.8	18.8	29.5	45.3	62.6	81.3	-92.9
iso-Propyl formate	C ₄ H ₈ O ₂	-52.0	-32.7	-22.7	-12.1	-0.2	+7.5	17.8	33.6	50.5	68.3	
4,4'-iso-Propylidenebisphenol	C ₁₅ H ₁₆ O ₂	193.0	224.2	240.8	255.5	273.0	282.9	297.0	317.5	339.0	360.5	
<i>n</i> -Propyl iodide (1-iodopropane)	C ₃ H ₇ I	-36.0	-13.5	-2.4	+10.0	23.6	32.1	43.8	61.8	81.8	102.5	-98.8
iso-Propyl iodide (2-iodopropane)	C ₃ H ₇ I	-43.3	-22.1	-11.7	0.0	+13.2	21.6	32.8	50.0	69.5	89.5	-90
<i>n</i> -Propyl levulinate	C ₈ H ₁₄ O ₃	59.7	86.3	99.9	114.0	130.1	140.6	154.0	175.6	198.0	221.2	
iso-Propyl levulinate	C ₈ H ₁₄ O ₃	48.0	74.5	88.0	102.4	118.1	127.8	141.8	161.6	185.2	208.2	
Propyl mercaptan (1-propanethiol)	C ₃ H ₇ S	-56.0	-36.3	-26.3	-15.4	-3.2	+4.6	15.3	31.5	49.2	67.4	-112
2-iso-Propylnaphthalene	C ₁₃ H ₁₄	76.0	107.9	123.4	140.3	159.0	171.4	187.6	211.8	238.5	266.0	
iso-Propyl β-naphthyl ketone (2-isobutyronaphthone)	C ₁₄ H ₁₄ O	133.2	165.4	181.0	197.7	215.6	227.0	242.3	264.0	288.2	313.0	
2-iso-Propylphenol	C ₉ H ₁₂ O	56.6	83.8	97.0	111.7	127.5	137.7	150.3	170.1	192.6	214.5	15.5
3-iso-Propylphenol	C ₉ H ₁₂ O	62.0	90.3	104.1	119.8	136.2	146.6	160.2	182.0	205.0	228.0	26
4-iso-Propylphenol	C ₉ H ₁₂ O	67.0	94.7	108.0	123.4	139.8	149.7	163.3	184.0	206.1	228.2	61
Propyl propionate	C ₆ H ₁₂ O ₂	-14.2	+8.0	19.4	31.6	45.0	53.8	65.2	82.7	102.0	122.4	-76
4-iso-Propylstyrene	C ₁₁ H ₁₄	34.7	62.3	76.0	91.2	108.0	118.4	132.8	153.9	178.0	202.5	
Propyl isovalerate	C ₈ H ₁₆ O ₂	+8.0	32.8	45.1	58.0	72.8	82.3	95.0	113.9	135.0	155.9	
Pulegone	C ₁₀ H ₁₆ O	58.3	82.5	94.0	106.8	121.7	130.2	143.1	162.5	189.8	221.0	
Pyridine	C ₅ H ₅ N	-18.9	+2.5	13.2	24.8	38.0	46.8	57.8	75.0	95.6	115.4	-42
Pyrocatechol	C ₆ H ₆ O ₂	104.0	118.3	134.0	150.6	161.7	176.0	197.7	221.5	245.5	270.0	105
Pyrocatechol diacetate (1,2-phenylene diacetate)	C ₁₀ H ₁₀ O ₄	98.0	129.8	145.7	161.8	179.8	191.6	206.5	228.7	253.3	278.0	
Pyrogallol	C ₆ H ₆ O ₃		151.7	167.7	185.3	204.2	216.3	232.0	255.3	281.5	309.0	133
Pyrotartaric anhydride	C ₅ H ₆ O ₃	69.7	99.7	114.2	130.0	147.8	158.6	173.8	196.1	221.0	247.4	
Pyruvic acid	C ₃ H ₄ O ₃	21.4	45.8	57.9	70.8	85.3	94.1	106.5	124.7	144.7	165.0	13.6
Quinoline	C ₉ H ₇ N	59.7	89.6	103.8	119.8	136.7	148.1	163.2	186.2	212.3	237.7	-15
iso-Quinoline	C ₉ H ₇ N	63.5	92.7	107.8	123.7	141.6	152.0	167.6	190.0	214.5	240.5	24.6
Resorcinol	C ₆ H ₆ O ₂	108.4	138.0	152.1	168.0	185.3	195.8	209.8	230.8	253.4	276.5	110.7
Safrole	C ₁₀ H ₁₀ O ₂	63.8	93.0	107.6	123.0	140.1	150.3	165.1	186.2	210.0	233.0	11.2
Salicylaldehyde	C ₇ H ₆ O ₂	33.0	60.1	73.8	88.7	105.2	115.7	129.4	150.0	173.7	196.5	-7
Salicylic acid	C ₇ H ₆ O ₃	113.7	136.0	146.2	156.8	172.2	182.0	193.4	210.0	230.5	256.0	159
Sebacic acid	C ₁₀ H ₁₈ O ₄	183.0	215.7	232.0	250.0	268.2	279.8	294.5	313.2	332.8	352.3	134.5
Selenophene	C ₄ H ₄ Se	-39.0	-16.0	-4.0	+9.1	24.1	33.8	47.0	66.7	89.8	114.3	
Skatole	C ₉ H ₈ N	95.0	124.2	139.6	154.3	171.9	183.6	197.4	218.8	242.5	266.2	95
Stearaldehyde	C ₁₈ H ₃₆ O	140.0	174.6	192.1	210.6	230.8	244.2	260.0	285.0	313.8	342.5	63.5
Stearic acid	C ₁₈ H ₃₆ O ₂	173.7	209.0	225.0	243.4	263.3	275.5	291.0	316.5	343.0	370.0	69.3
Stearyl alcohol (1-octadecanol)	C ₁₈ H ₃₆ O	150.3	185.6	202.0	220.0	240.4	252.7	269.4	293.5	320.3	349.5	58.5
Styrene	C ₈ H ₈	-7.0	+18.0	30.8	44.6	59.8	69.5	82.0	101.3	122.5	145.2	-30.6
Styrene dibromide [(1,2-dibromoethyl) benzene]	C ₈ H ₈ Br ₂	86.0	115.6	129.8	145.2	161.8	172.2	186.3	207.8	230.0	254.0	
Suberic acid	C ₈ H ₁₄ O ₄	172.8	205.5	219.5	238.2	254.6	265.4	279.8	300.5	322.8	345.5	142
Succinic anhydride	C ₄ H ₄ O ₃	92.0	115.0	128.2	145.3	163.0	174.0	189.0	212.0	237.0	261.0	119.6
Succinimide	C ₄ H ₅ NO ₂	115.0	143.2	157.0	174.0	192.0	203.0	217.4	240.0	263.5	287.5	125.5
Succinyl chloride	C ₄ H ₄ Cl ₂ O ₂	39.0	65.0	78.0	91.8	107.5	117.2	130.0	149.3	170.0	192.5	17
α-Terpineol	C ₁₀ H ₁₈ O	52.8	80.4	94.3	109.8	126.0	136.3	150.1	171.2	194.3	217.5	35
Terpenoline	C ₁₀ H ₁₆	32.3	58.0	70.6	84.8	100.0	109.8	122.7	142.0	163.5	185.0	

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Continued)

Compound		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Name	Formula	Temperature, °C										
1,1,1,2-Tetrabromoethane	C ₂ H ₂ Br ₄	58.0	83.3	95.7	108.5	123.2	132.0	144.0	161.5	181.0	200.0	
1,1,2,2-Tetrabromoethane	C ₂ H ₂ Br ₄	65.0	95.5	110.0	126.0	144.0	155.1	170.0	192.5	217.5	243.5	
Tetraisobutylene	C ₁₆ H ₃₂	63.8	93.7	108.5	124.5	142.2	152.6	167.5	190.0	214.6	240.0	
Tetracosane	C ₂₄ H ₅₀	183.8	219.6	237.6	255.3	276.3	288.4	305.2	330.5	358.0	386.4	51.1
1,2,3,4-Tetrachlorobenzene	C ₆ H ₂ Cl ₄	68.5	99.6	114.7	131.2	149.2	160.0	175.7	198.0	225.5	254.0	46.5
1,2,3,5-Tetrachlorobenzene	C ₆ H ₂ Cl ₄	58.2	89.0	104.1	121.6	140.0	152.0	168.0	193.7	220.0	246.0	54.5
1,2,4,5-Tetrachlorobenzene	C ₆ H ₂ Cl ₄					146.0	157.7	173.5	196.0	220.5	245.0	139
1,1,2,2-Tetrachloro-1,2-difluoroethane	C ₂ Cl ₂ F ₂	-37.5	-16.0	-5.0	+6.7	19.8	28.1	38.6	55.0	73.1	92.0	26.5
1,1,1,2-Tetrachloroethane	C ₂ H ₂ Cl ₄	-16.3	+7.4	19.3	32.1	46.7	56.0	68.0	87.2	108.2	130.5	-68.7
1,1,2,2-Tetrachloroethane	C ₂ H ₂ Cl ₄	-3.8	+20.7	33.0	46.2	60.8	70.0	83.2	102.2	124.0	145.9	-36
1,2,3,5-Tetrachloro-4-ethylbenzene	C ₈ H ₆ Cl ₄	77.0	110.0	126.0	143.7	162.1	175.0	191.6	215.3	243.0	270.0	
Tetrachloroethylene	C ₂ Cl ₄	-20.6	+2.4	13.8	26.3	40.1	49.2	61.3	79.8	100.0	120.8	-19.0
2,3,4,6-Tetrachlorophenol	C ₆ H ₂ Cl ₄ O	100.0	130.3	145.3	161.0	179.1	190.0	205.2	227.2	250.4	275.0	69.5
3,4,5,6-Tetrachloro-1,2-xylene	C ₈ H ₆ Cl ₄	94.4	125.0	140.3	156.0	174.2	185.8	200.5	223.0	248.3	273.5	
Tetradecane	C ₁₄ H ₃₀	76.4	106.0	120.7	135.6	152.7	164.0	178.5	201.8	226.8	252.5	5.5
Tetradecylamine	C ₁₄ H ₃₁ N	102.6	135.8	152.0	170.0	189.0	200.2	215.7	239.8	264.6	291.2	
Tetradecyltrimethylsilane	C ₁₇ H ₃₆ Si	120.0	150.7	166.2	183.5	201.5	213.3	227.8	250.0	275.0	300.0	
Tetraethoxysilane	C ₈ H ₂₀ O ₄ Si	16.0	40.3	52.6	65.8	81.1	90.7	103.6	123.5	146.2	168.5	
1,2,3,4-Tetraethylbenzene	C ₁₄ H ₂₂	65.7	96.2	111.6	127.7	145.8	156.7	172.4	196.0	221.4	248.0	11.6
Tetraethylene glycol	C ₈ H ₁₈ O ₅	153.9	183.7	197.1	212.3	228.0	237.8	250.0	268.4	288.0	307.8	
Tetraethylene glycol chlorohydrin	C ₈ H ₁₇ ClO ₄	110.1	141.8	156.1	172.6	190.0	200.5	214.7	236.5	258.2	281.5	
Tetraethyllead	C ₈ H ₂₀ Pb	38.4	63.6	74.8	88.0	102.4	111.7	123.8	142.0	161.8	183.0	-136
Tetraethylsilane	C ₈ H ₂₀ Si	-1.0	+23.9	36.3	50.0	65.3	74.8	88.0	108.0	130.2	153.0	
Tetralin	C ₁₀ H ₁₂	38.0	65.3	79.0	93.8	110.4	121.3	135.3	157.2	181.8	207.2	-31.0
1,2,3,4-Tetramethylbenzene	C ₁₀ H ₁₄	42.6	68.7	81.8	95.8	111.5	121.8	135.7	155.7	180.0	204.4	-6.2
1,2,3,5-Tetramethylbenzene	C ₁₀ H ₁₄	40.6	65.8	77.8	91.0	105.8	115.4	128.3	149.9	173.7	197.9	-24.0
1,2,4,5-Tetramethylbenzene	C ₁₀ H ₁₄	45.0	65.0	74.6	88.0	104.2	114.8	128.1	149.5	172.1	195.9	79.5
2,2,3,3-Tetramethylbutane	C ₈ H ₁₈	-17.4	+3.2	13.5	24.6	36.8	44.5	54.8	70.2	87.4	106.3	-102.2
Tetramethylene dibromide (1,4-dibromobutane)	C ₄ H ₈ Br ₂	32.0	58.8	72.4	87.6	104.0	115.1	128.7	149.8	173.8	197.5	-20
Tetramethyllead	C ₄ H ₁₂ Pb	-29.0	-6.8	+4.4	16.6	30.3	39.2	50.8	68.8	89.0	110.0	-27.5
Tetramethyltin	C ₄ H ₁₂ Sn	-51.3	-31.0	-20.6	-9.3	+3.5	11.7	22.8	39.8	58.5	78.0	
Tetrapropylene glycol monoisopropyl ether	C ₁₅ H ₃₂ O ₅	116.6	147.8	163.0	179.8	197.7	209.0	223.3	245.0	268.3	292.7	
Thioacetic acid (mercaptoacetic acid)	C ₂ H ₄ O ₂ S	60.0	87.7	101.5	115.8	131.8	142.0	154.0				-16.5
Thiodiglycol (2,2'-thiodiethanol)	C ₄ H ₁₀ O ₂ S	42.0	96.0	128.0	165.0	210.0	240.5	285				
Thiophene	C ₄ H ₄ S	-40.7	-20.8	-10.9	0.0	+12.5	20.1	30.5	46.5	64.7	84.4	-38.3
Thiophenol (benzenethiol)	C ₆ H ₆ S	18.6	43.7	56.0	69.7	84.2	93.9	106.6	125.8	146.7	168.0	
α-Thujone	C ₁₀ H ₁₆ O	38.3	65.7	79.3	93.7	110.0	120.2	134.0	154.2	177.8	201.0	
Thymol	C ₁₀ H ₁₄ O	64.3	92.8	107.4	122.6	139.8	149.8	164.1	185.5	209.2	231.8	51.5
Tiglaldehyde	C ₅ H ₈ O	-25.0	-1.6	+10.0	23.2	37.0	45.8	57.7	75.4	95.5	116.4	
Tiglic acid	C ₅ H ₈ O ₂	52.0	77.8	90.2	103.8	119.0	127.8	140.5	158.0	179.2	198.5	64.5
Tiglonitrile	C ₅ H ₇ N	-25.5	-2.4	+9.2	22.1	36.7	46.0	58.2	77.8	99.7	122.0	
Toluene	C ₇ H ₈	-26.7	-4.4	+6.4	18.4	31.8	40.3	51.9	69.5	89.5	110.6	-95.0
Toluene-2,4-diamine	C ₇ H ₁₀ N ₂	106.5	137.2	151.7	167.9	185.7	196.2	211.5	232.8	256.0	280.0	99
2-Toluic nitrile (2-tolunitrile)	C ₈ H ₇ N	36.7	64.0	77.9	93.0	110.0	120.8	135.0	156.0	180.0	205.2	-13
4-Toluic nitrile (4-tolunitrile)	C ₈ H ₇ N	42.5	71.3	85.8	101.7	109.5	130.0	145.2	167.3	193.0	217.6	29.5
2-Toluidine	C ₇ H ₉ N	44.0	69.3	81.4	95.1	110.0	119.8	133.0	153.0	176.2	199.7	-16.3
3-Toluidine	C ₇ H ₉ N	41.0	68.0	82.0	96.7	113.5	123.8	136.7	157.6	180.6	203.3	-31.5
4-Toluidine	C ₇ H ₉ N	42.0	68.2	81.8	95.8	111.5	121.5	133.7	154.0	176.9	200.4	44.5
2-Tolyl isocyanide	C ₈ H ₇ N	25.2	51.0	64.0	78.2	94.0	104.0	117.7	137.8	159.9	183.5	
4-Tolylhydrazine	C ₈ H ₁₀ N ₂	82.4	110.0	123.8	138.6	154.1	165.0	178.0	198.0	219.5	242.0	65.5
Tribromoacetaldehyde	C ₂ HBr ₃ O	18.5	45.0	58.0	72.1	87.8	97.5	110.2	130.0	151.6	174.0	
1,1,2-Tribromobutane	C ₄ H ₇ Br ₃	45.0	73.5	87.8	103.2	120.2	131.6	146.0	167.8	192.0	216.2	
1,2,2-Tribromobutane	C ₄ H ₇ Br ₃	41.0	69.0	83.2	98.6	116.0	127.0	141.8	163.5	188.0	213.8	
2,2,3-Tribromobutane	C ₄ H ₇ Br ₃	38.2	66.0	79.8	94.6	111.8	122.2	136.3	157.8	182.2	206.5	
1,1,2-Tribromoethane	C ₂ H ₃ Br ₃	32.6	58.0	70.6	84.2	100.0	110.0	123.5	143.5	165.4	188.4	-26
1,2,3-Tribromopropane	C ₃ H ₅ Br ₃	47.5	75.8	90.0	105.8	122.8	134.0	148.0	170.0	195.0	220.0	16.5
Triisobutylamine	C ₁₂ H ₂₇ N	32.3	57.4	69.8	83.0	97.8	107.3	119.7	138.0	157.8	179.0	-22
Triisobutylene	C ₁₂ H ₂₄	18.0	44.0	56.5	70.0	86.7	96.7	110.0	130.2	153.0	179.0	
2,4,6-Triterbutylphenol	C ₁₈ H ₃₀ O	95.2	126.1	142.0	158.0	177.4	188.0	203.0	226.2	250.6	276.3	
Trichloroacetic acid	C ₂ HCl ₃ O ₂	51.0	76.0	88.2	101.8	116.3	125.9	137.8	155.4	175.2	195.6	57
Trichloroacetic anhydride	C ₂ Cl ₆ O ₂	56.2	85.3	99.6	114.3	131.2	141.8	155.2	176.2	199.8	223.0	
Trichloroacetyl bromide	C ₂ BrCl ₃ O	-7.4	+16.7	29.3	42.1	57.2	66.7	79.5	98.4	120.2	143.0	
2,4,6-Trichloroaniline	C ₆ H ₃ Cl ₃ N	134.0	157.8	170.0	182.6	195.8	204.5	214.6	229.8	246.4	262.0	78
1,2,3-Trichlorobenzene	C ₆ H ₃ Cl ₃	40.0	70.0	85.6	101.8	119.8	131.5	146.0	168.2	193.5	218.5	52.5
1,2,4-Trichlorobenzene	C ₆ H ₃ Cl ₃	38.4	67.3	81.7	97.2	114.8	125.7	140.0	162.0	187.7	213.0	17
1,3,5-Trichlorobenzene	C ₆ H ₃ Cl ₃		63.8	78.0	93.7	110.8	121.8	136.0	157.7	183.0	208.4	63.5
1,2,3-Trichlorobutane	C ₄ H ₇ Cl ₃	+0.5	27.2	40.0	55.0	71.5	82.0	96.2	118.0	143.0	169.0	
1,1,1-Trichloroethane	C ₂ H ₃ Cl ₃	-52.0	-32.0	-21.9	-10.8	+1.6	9.5	20.0	36.2	54.6	74.1	-30.6
1,1,2-Trichloroethane	C ₂ H ₃ Cl ₃	-24.0	-2.0	+8.3	21.6	35.2	44.0	55.7	73.3	93.0	113.9	-36.7
Trichloroethylene	C ₂ HCl ₃	-43.8	-22.8	-12.4	-1.0	+11.9	20.0	31.4	48.0	67.0	86.7	-73
Trichlorofluoromethane	CCl ₃ F	-84.3	-67.6	-59.0	-49.7	-39.0	-32.3	-23.0	-9.1	+6.8	23.7	
2,4,5-Trichlorophenol	C ₆ H ₃ Cl ₃ O	72.0	102.1	117.3	134.0	151.5	162.5	178.0	201.5	226.5	251.8	62
2,4,6-Trichlorophenol	C ₆ H ₃ Cl ₃ O	76.5	105.9	120.2	135.8	152.2	163.5	177.8	199.0	222.5	246.0	68.5

TABLE 2-8 Vapor Pressures of Organic Compounds, up to 1 atm (Concluded)

		Pressure, mm Hg										Melting point, °C
		1	5	10	20	40	60	100	200	400	760	
Compound	Formula	Temperature, °C										
Tri-2-chlorophenylthiophosphate	C ₁₈ H ₁₂ Cl ₃ O ₃ PS	188.2	217.2	231.2	246.7	261.7	271.5	283.8	302.8	322.0	341.3	
1,1,1-Trichloropropane	C ₃ H ₅ Cl ₃	-28.8	-7.0	+4.2	16.2	29.9	38.3	50.0	67.7	87.5	108.2	-77.7
1,2,3-Trichloropropane	C ₃ H ₃ Cl ₃	+9.0	33.7	46.0	59.3	74.0	83.6	96.1	115.6	137.0	158.0	-14.7
1,1,2-Trichloro-1,2,2-trifluoroethane	C ₂ Cl ₃ F ₃	-68.0	-49.4	-40.3	-30.0	-18.5	-11.2	-1.7	+13.5	30.2	47.6	-35
Tricosane	C ₂₃ H ₄₈	170.0	206.3	223.0	242.0	261.3	273.8	289.8	313.5	339.8	366.5	47.7
Tridecane	C ₁₃ H ₂₈	59.4	98.3	104.0	120.2	137.7	148.2	162.5	185.0	209.4	234.0	-6.2
Tridecanoic acid	C ₁₃ H ₂₆ O ₂	137.8	166.3	181.0	195.8	212.4	222.0	236.0	255.2	276.5	299.0	41
Triethoxymethylsilane	C ₇ H ₁₈ O ₃ Si	-1.5	+22.8	34.6	47.2	61.7	70.4	82.7	101.0	121.8	143.5	
Triethoxyphenylsilane	C ₁₂ H ₂₀ O ₃ Si	71.0	98.8	112.6	127.2	143.5	153.2	167.5	188.0	210.5	233.5	
1,2,4-Triethylbenzene	C ₁₂ H ₁₈	46.0	74.2	88.5	104.0	121.7	132.2	146.8	168.3	193.7	218.0	
1,3,4-Triethylbenzene	C ₁₂ H ₁₈	47.9	76.0	90.2	105.8	122.6	133.4	147.7	168.3	193.2	217.5	
Triethylborine	C ₆ H ₁₅ B			-148.0	-140.6	-131.4	-125.2	-116.0	-101.0	-81.0	-56.2	
Triethyl camphoronate citrate	C ₁₅ H ₂₆ O ₆		150.2	166.0	183.6	201.8	213.5	228.6	250.8	276.0	301.0	135
Triethyleneglycol	C ₆ H ₁₄ O ₄	107.0	138.7	144.0	171.1	190.4	202.5	217.8	242.2	267.5	294.0	
Triethylheptylsilane	C ₁₃ H ₃₀ Si	114.0	144.0	158.1	174.0	191.3	201.5	214.6	235.2	256.6	278.0	
Triethyloctylsilane	C ₁₄ H ₃₂ Si	70.0	99.8	114.6	130.3	148.0	158.2	174.0	196.0	221.0	247.3	
Triethyl orthoformate	C ₇ H ₁₆ O ₃	73.7	104.8	120.6	137.7	155.7	168.0	184.3	208.0	235.0	262.0	
phosphate	C ₆ H ₁₅ O ₄ P	+5.5	29.2	40.5	53.4	67.5	76.0	88.0	106.0	125.7	146.0	
Triethylthallium	C ₆ H ₁₅ Tl	39.6	67.8	82.1	97.8	115.7	126.3	141.6	163.7	187.0	211.0	
Trifluorophenylsilane	C ₆ H ₅ F ₃ Si	+9.3	37.6	51.7	67.7	85.4	95.7	112.1	136.0	163.5	192.1	-63.0
Trimethyllyl phosphate	C ₁₂ H ₂₁ PO ₄	-31.0	-9.7	+0.8	12.3	25.4	33.2	44.2	60.1	78.7	98.3	
2,3,5-Trimethylacetophenone	C ₁₁ H ₁₄ O	93.7	131.0	149.8	169.8	192.0	207.0	225.7	255.0	288.5	324.0	
Trimethylamine	C ₃ H ₉ N	79.0	108.0	122.3	137.5	154.2	165.7	179.7	201.3	224.3	247.5	
2,4,5-Trimethylaniline	C ₉ H ₁₃ N	-97.1	-81.7	-73.8	-65.0	-55.2	-48.8	-40.3	-27.0	-12.5	+2.9	-117.1
1,2,3-Trimethylbenzene	C ₉ H ₁₂	68.4	95.9	109.0	123.7	139.8	149.5	162.0	182.3	203.7	234.5	67
1,2,4-Trimethylbenzene	C ₉ H ₁₂	16.8	42.9	55.9	69.9	85.4	95.3	108.8	129.0	152.0	176.1	-25.5
1,3,5-Trimethylbenzene	C ₉ H ₁₂	13.6	38.3	50.7	64.5	79.8	89.5	102.8	122.7	145.4	169.2	-44.1
2,2,3-Trimethylbutane	C ₉ H ₁₂	9.6	34.7	47.4	61.0	76.1	85.8	98.9	118.6	141.0	164.7	-44.8
Trimethyl citrate	C ₉ H ₁₆			-18.8	-7.5	+5.2	13.3	24.4	41.2	60.4	80.9	-25.0
Trimethyleneglycol (1,3-propanediol)	C ₉ H ₁₄ O ₇	106.2	146.2	160.4	177.2	194.2	205.5	219.6	241.3	264.2	287.0	78.5
1,2,4-Trimethyl-5-ethylbenzene	C ₃ H ₈ O ₂	59.4	87.2	100.6	115.5	131.0	141.1	153.4	172.8	193.8	214.2	
1,3,5-Trimethyl-2-ethylbenzene	C ₁₁ H ₁₆	43.7	71.2	84.6	99.7	106.0	126.3	140.3	160.3	184.5	208.1	
2,2,3-Trimethylpentane	C ₁₁ H ₁₆	38.8	67.0	80.5	96.0	113.2	123.8	137.9	158.4	183.5	208.0	
2,2,4-Trimethylpentane	C ₈ H ₁₈	-29.0	-7.1	+3.9	16.0	29.5	38.1	49.9	67.8	88.2	109.8	-112.3
2,3,3-Trimethylpentane	C ₈ H ₁₈	-36.5	-15.0	-4.3	+7.5	20.7	29.1	40.7	58.1	78.0	99.2	-107.3
2,3,4-Trimethylpentane	C ₈ H ₁₈	-25.8	-3.9	+6.9	19.2	33.0	41.8	53.8	72.0	92.7	114.8	-101.5
2,2,4-Trimethyl-3-pentanone	C ₈ H ₁₈	-26.3	-4.1	+7.1	19.3	32.9	41.6	53.4	71.3	91.8	113.5	-109.2
Trimethyl phosphate	C ₈ H ₁₆ O	14.7	36.0	46.4	57.6	69.8	77.3	87.6	102.2	118.4	135.0	
2,4,5-Trimethylstyrene	C ₃ H ₈ O ₄ P	26.0	53.7	67.8	83.0	100.0	110.0	124.0	145.0	167.8	192.7	
2,4,6-Trimethylstyrene	C ₁₁ H ₁₄	48.1	77.0	91.6	107.1	124.2	135.5	149.8	171.8	196.1	221.2	
Trimethylsuccinic anhydride	C ₁₁ H ₁₄	37.5	65.7	79.7	94.8	111.8	122.3	136.8	157.8	182.3	207.0	
Triphenylmethane	C ₇ H ₁₀ O ₃	53.5	82.6	97.4	113.8	131.0	142.2	156.5	179.8	205.5	231.0	
Triphenylphosphate	C ₁₉ H ₁₆	169.7	188.4	197.0	206.8	215.5	221.2	228.4	239.7	249.8	259.2	93.4
Tripropyleneglycol	C ₁₈ H ₁₅ O ₄ P	193.5	230.4	249.8	269.7	290.3	305.2	322.5	349.8	379.2	413.5	49.4
Tripropyleneglycol monobutyl ether	C ₉ H ₂₀ O ₄	96.0	125.7	140.5	155.8	173.7	184.6	199.0	220.2	244.3	267.2	
Tripropyleneglycol monoisopropyl ether	C ₁₃ H ₂₈ O ₄	101.5	131.6	147.0	161.8	179.8	190.2	204.4	224.4	247.0	269.5	
Trityl phosphate	C ₁₂ H ₂₆ O ₄	82.4	112.4	127.3	143.7	161.4	173.2	187.8	209.7	232.8	256.6	
Undecane	C ₂₁ H ₂₁ O ₄ P	154.6	184.2	198.0	213.2	229.7	239.8	252.2	271.8	292.7	313.0	
Undecanoic acid	C ₁₁ H ₂₄	32.7	59.7	73.9	85.6	104.4	115.2	128.1	149.3	171.9	195.8	-25.6
10-Undecenoic acid	C ₁₁ H ₂₂ O ₂	101.4	133.1	149.0	166.0	185.6	197.2	212.5	237.8	262.8	290.0	29.5
Undecan-2-ol	C ₁₁ H ₂₀ O ₂	114.0	142.8	156.3	172.0	188.7	199.5	213.5	232.8	254.0	275.0	24.5
n-Valeric acid	C ₁₁ H ₂₄ O	71.1	99.0	112.8	127.5	143.7	153.7	167.2	187.7	209.8	232.0	
iso-Valeric acid	C ₅ H ₁₀ O ₂	42.2	67.7	79.8	93.1	107.8	116.6	128.3	146.0	165.0	184.4	-34.5
γ-Valerolactone	C ₅ H ₁₀ O ₂	34.5	59.6	71.3	84.0	98.0	107.3	118.9	136.2	155.2	175.1	-37.6
Valeronitrile	C ₅ H ₈ O ₂	37.5	65.8	79.8	95.2	101.9	122.4	136.5	157.7	182.3	207.5	
Vanillin	C ₅ H ₉ N	-6.0	+18.1	30.0	43.3	57.8	66.9	78.6	97.7	118.7	140.8	
Vinyl acetate	C ₈ H ₈ O ₃	107.0	138.4	154.0	170.5	188.7	199.8	214.5	237.3	260.0	285.0	81.5
2-Vinylanisole	C ₄ H ₆ O ₂	-48.0	-28.0	-18.0	-7.0	+5.3	13.0	23.3	38.4	55.5	72.5	
3-Vinylanisole	C ₉ H ₁₀ O	41.9	68.0	81.0	94.7	110.0	119.8	132.3	151.0	172.1	194.0	
4-Vinylanisole	C ₉ H ₁₀ O	43.4	69.9	83.0	97.2	112.5	122.3	135.3	154.0	175.8	197.5	
Vinyl chloride (1-chloroethylene)	C ₉ H ₁₀ O	45.2	72.0	85.7	100.0	116.0	126.1	139.7	159.0	182.0	204.5	
cyanoide (acrylonitrile)	C ₂ H ₃ Cl	-105.6	-90.8	-83.7	-75.7	-66.8	-61.1	-53.2	-41.3	-28.0	-13.8	-153.7
fluoride (1-fluoroethylene)	C ₃ H ₃ N	-51.0	-30.7	-20.3	-9.0	+3.8	11.8	22.8	38.7	58.3	78.5	-82
Vinylidene chloride (1,1-dichloroethene)	C ₂ H ₃ F	-149.3	-138.0	-132.2	-125.4	-118.0	-113.0	-106.2	-95.4	-84.0	-72.2	-160.5
4-Vinylphenetole	C ₂ H ₂ Cl ₂	-77.2	-60.0	-51.2	-41.7	-31.1	-24.0	-15.0	-1.0	+14.8	31.7	-122.5
2-Xenyl dichlorophosphate	C ₁₀ H ₁₂ O	64.0	91.7	105.6	120.3	136.3	146.4	159.8	180.0	202.8	225.0	
2,4-Xyaldehyde	C ₁₂ H ₆ Cl ₂ PO	138.2	171.1	187.0	205.0	223.8	236.0	251.5	275.3	301.5	328.5	
2-Xylene (2-xylene)	C ₉ H ₁₀ O	59.0	85.9	99.0	114.0	129.7	139.8	152.2	172.3	194.1	215.5	75
3-Xylene (3-xylene)	C ₈ H ₁₀	-3.8	+20.2	32.1	45.1	59.5	68.8	81.3	100.2	121.7	144.4	-25.2
4-Xylene (4-xylene)	C ₈ H ₁₀	-6.9	+16.8	28.3	41.1	55.3	64.4	76.8	95.5	116.7	139.1	-47.9
2,4-Xyldine	C ₈ H ₁₀	-8.1	+15.5	27.3	40.1	54.4	63.5	75.9	94.6	115.9	138.3	+13.3
2,6-Xyldine	C ₈ H ₁₁ N	52.6	79.8	93.0	107.6	123.8	133.7	146.8	166.4	188.3	211.5	
	C ₈ H ₁₁ N	44.0	72.6	87.0	102.7	120.2	131.5	146.0	168.0	193.7	217.9	

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TABLE 3-6 Vapor Pressures of Inorganic Compounds, above 1 atm*

Compound		Pressure, atm.									Critical point	
Name	Formula	1	2	5	10	20	30	40	50	60	<i>t_c</i> , °C.	<i>P_c</i> , atm.
		Temperature, °C.										
Ammonia.....	NH ₃	-33.6	-18.7	+4.7	25.7	50.1	66.1	78.9	89.3	98.3	132.4	111.5
Carbon monoxide.....	CO	-191.3	-183.5	-170.7	-161.0	-149.7	-141.9	.....	.....	.....	-138.7	34.6
dioxide.....	CO ₂	-78.2	-69.1	-56.7	-39.5	-18.9	-5.3	+5.9	14.9	22.4	31.1	73.0
disulfide.....	CS ₂	46.5	69.1	104.8	136.3	175.5	201.5	222.8	240.0	256.0	273.0	72.9
Chlorine.....	Cl ₂	-33.8	-16.9	+10.3	35.6	65.0	84.8	101.6	115.2	127.1	144.0	76.1
para-Hydrogen.....	H ₂	-252.5	-250.2	-246.0	-241.8	.....	.....	.....	.....	.....	-240.0	12.80
Hydrogen bromide.....	HBr	-66.5	-51.5	-29.1	-8.4	+16.8	33.9	48.1	60.0	70.6	90.0	84.4
chloride.....	HCl	-84.8	-71.4	-50.5	-31.7	-8.8	+5.9	17.8	27.9	36.2	51.4	81.6
cyanide.....	HCN	25.9	45.8	75.8	102.7	135.0	153.8	169.9	183.5	.....	183.5	50.0
Water.....	H ₂ O	100.0	120.1	152.4	180.5	213.1	234.6	251.1	264.7	276.5	374.2	218.0
Hydrogen sulfide.....	H ₂ S	-60.4	-45.9	-22.3	-0.4	+25.5	41.9	55.8	66.7	76.3	100.3	88.9
Krypton.....	Kr	-152.0	-143.5	-130.0	-118.0	-101.7	-88.8	-78.4	-66.5	.....	-63	54
Nitrogen.....	N ₂	-195.8	-189.2	-179.1	-169.8	-157.6	-148.3	.....	.....	.....	-147.2	33.5
Oxygen.....	O ₂	-183.1	-176.0	-164.5	-153.2	-140.0	-130.7	-124.1	.....	.....	-118.9	49.7
Sulfur dioxide.....	SO ₂	-10.0	+6.3	32.1	55.5	83.8	102.6	118.0	130.2	141.7	157.2	77.7
trioxide.....	SO ₃	44.8	60.0	82.5	104.0	138.0	157.8	175.0	187.8	198.0	218.3	83.6

* Compiled from the extended tables published by D. R. Stull in *Ind. Eng. Chem.*, 39, 517 (1947).

TABLE 3-9 Vapor Pressures of Organic Compounds, above 1 atm*

Compound		Pressure, atm.										Critical point	
Name	Formula	1	2	5	10	20	30	40	50	60	<i>t_c</i> , °C.	<i>P_c</i> , atm.	
Temperature, °C.													
Acetic acid	C ₂ H ₄ O ₂	118.1	143.5	180.3	214.0	252.0	276.5	297.0	312.5		321.6	57.2	
anhydride	C ₄ H ₆ O ₃	139.6	162.0	194.0	221.5	253.0	272.8	288.5			296	46	
Acetone	C ₃ H ₆ O	56.5	78.6	113.0	144.5	181.0	205.0	214.5			235.0	47.0	
Acetylene	C ₂ H ₂	-84.0	-71.6	-50.2	-32.7	-10.0	+4.8	16.8	26.8	34.8	36.0	62.0	
Allene (propadiene)	C ₃ H ₄	-35.0	-18.4	-8.0	33.2	64.5	85.5	103.5	118.0		120.7	51.8	
Aniline	C ₆ H ₅ N	184.4	212.8	254.8	292.7	342.0	375.5	400.0	422.4		426	52.4	
Benzene	C ₆ H ₆	80.1	103.8	142.5	178.8	221.5	249.5	272.3	290.3		290.5	50.1	
Bromobenzene	C ₆ H ₅ Br	156.2	186.2	232.5	274.5	327.0	359.8	387.5			397	44.6	
1,3-Butadiene	C ₄ H ₆	-4.5	+15.3	47.0	76.0	114.0	139.8	158.0			161.8	42.6	
iso-Butane (2-methylpropane)	C ₄ H ₁₀	-11.7	+7.5	39.0	66.8	99.5	120.5				134.0	37.0	
n-Butane	C ₄ H ₁₀	-0.5	+18.8	50.0	79.5	116.0	140.6				152.8	36.0	
iso-Butyl alcohol (2-methylpropanol-1)	C ₄ H ₁₀ O	108.0	127.3	156.2	182.0	212.5	232.0	251.0			265	48	
n-Butyl alcohol (1-butanol)	C ₄ H ₁₀ O	117.5	139.8	172.5	203.0	237.0	259.0	277.0			287	48.4	
sec-Butyl alcohol (2-butanol)	C ₄ H ₁₀ O	99.5	118.2	147.5	172.0	204.0	230.0	251.0			265	48	
tert-Butyl alcohol (trimethyl carbinol)	C ₄ H ₁₀ O	82.9	102.0	130.0	154.2	184.5	207.0	222.5			235	49	
iso-Butyl formate	C ₆ H ₁₂ O ₂	98.2	121.8	157.8	192.4	234.0	261.0				278.0	38.0	
Butyric acid	C ₄ H ₈ O ₂	163.5	188.3	225.0	257.0	295.0	319.0	338.0	352.0		355	52.0	
iso-Butyric acid	C ₄ H ₈ O ₂	154.5	179.8	217.0	250.0	289.0	315.0	336.0			336	40.0	
Carbon dioxide	CO ₂	-78.2	-69.1	-56.7	-39.5	-18.9	-5.3	+5.9	14.9	22.4	31.1	73.0	
disulfide	CS ₂	46.5	69.1	104.8	136.3	175.5	201.5	222.8	240.0	256.0	273.0	72.9	
monoxide	CO	-191.3	-183.5	-170.7	-161.0	-149.7	-141.9				-138.7	34.6	
tetrachloride	CCl ₄	76.7	102.0	141.7	178.0	222.0	251.2	276.0			283.1	45.0	
Chlorobenzene	C ₆ H ₅ Cl	132.2	160.2	205.0	245.3	292.8	324.4	349.8			359.2	44.6	
Chlorodifluoromethane	CHClF ₂	-40.8	-24.7	+0.3	24.9	52.0	70.3	85.3			96	48.7	
Chloroform (trichloromethane)	CHCl ₃	61.3	83.9	120.0	152.3	191.8	216.5	237.5	254.0		260	54.9	
1-Chloro-1,2,2-trifluoroethylene	C ₂ ClF ₃	-27.9	-11.1	+15.5	40.0	71.1	91.9				107.0	39.0	
Chlorotrifluoromethane	CClF ₃	-81.2	-66.7	-42.7	-18.5	+12.0	34.8	52.8			53	40.3	
Cyanogen	C ₂ N ₂	-21.0	-4.4	+21.4	44.6	72.6	91.6	106.5	118.2		126.6	58.2	
Cyclohexane	C ₆ H ₁₂	80.7	106.0	146.4	184.0	228.4	257.5				279.9	39.8	
1,2-Dibromoethane	C ₂ H ₄ Br ₂	131.5	157.7	200.0	237.0	269.0	286.0	295.0	300.0	304.5	309.8	70.6	
Dichlorodifluoromethane	CCl ₂ F ₂	-29.8	-12.2	+16.1	42.4	74.0	95.6				111.5	39.6	
1,1-Dichloroethane	C ₂ H ₄ Cl ₂	57.3	80.2	117.3	150.3	192.7	220.0	243.0	261.5		261.5	50.0	
1,2-Dichloroethane	C ₂ H ₄ Cl ₂	83.7	108.1	147.8	183.5	226.5	254.0	272.0	285.0		288.4	53.0	
cis-1,2-Dichloroethylene	C ₂ H ₂ Cl ₂	-59.0	82.1	119.3	152.3	194.0	221.5	244.5	260.0		271.0	57.9	
trans-1,2-Dichloroethylene	C ₂ H ₂ Cl ₂	47.8	69.8	104.0	135.7	174.0	199.8	220.0	236.5		243.3	54.5	
Dichlorodifluoromethane	CHCl ₂ F	8.9	28.4	59.0	87.0	121.2	144.0	162.6	177.5		178.5	51.0	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	C ₂ Cl ₂ F ₄	3.5	22.8	54.0	82.3	117.5	140.9				145.7	32.3	
Diethylamine	C ₄ H ₁₁ N	55.5	77.8	113.0	145.3	184.5	210.0				223.3	36.6	
Diethyl ether	C ₄ H ₁₀ O	34.6	56.0	90.0	122.0	159.0	183.3				193.8	35.5	
sulfide	C ₂ H ₆ S	88.0	112.0	153.8	190.2	234.0	263.0				283.8	39.1	

Compound		Pressure, atm.										Critical point	
Name	Formula	1	2	5	10	20	30	40	50	60	<i>t_c</i> , °C.	<i>P_c</i> , atm.	
Temperature, °C.													
Dimethylamine	C ₂ H ₇ N	7.4	25.0	53.9	80.0	111.7	132.2	149.8	162.6		164.5	52.4	
2,3-Dimethylbutane	C ₆ H ₁₄	58.0	82.0	120.3	155.7	198.7	225.5				227.4	30.7	
Dimethyl ether	C ₂ H ₆ O	-23.7	-6.4	+20.8	45.5	75.7	96.0	112.1	125.2		126.9	52.0	
oxalate	C ₂ H ₂ O ₄	163.3	189.6	228.7							260	9.5	
sulfide	C ₂ H ₆ S	36.0	57.8	92.3	124.5	163.8	188.5	209.0	224.5		229.9	54.6	
n-Dodecane	C ₁₂ H ₂₆	216.2	249.2	300.0	345.8						385	17.5	
Ethane	C ₂ H ₆	-88.6	-75.0	-52.8	-32.0	-6.4	+10.0	23.6			32.3	48.2	
Ethyl acetate	C ₄ H ₈ O ₂	77.1	100.6	136.6	169.7	209.5	235.0				250.1	37.9	
alcohol (ethanol)	C ₂ H ₅ O	78.4	97.5	126.0	151.8	183.0	203.0	218.0	230.0	242.0	243.5	63.1	
Ethylamine	C ₂ H ₇ N	16.6	35.7	65.3	91.8	124.0	146.0	163.0	176.0		183.2	55.5	
Ethyl benzene	C ₈ H ₁₀	136.2	163.5	207.5	246.3	294.5	326.5				346.4	38.1	
bromide	C ₂ H ₅ Br	38.4	60.2	95.0	126.8	164.3	188.0	206.5	220.0	229.5	230.8	61.5	
chloride	C ₂ H ₅ Cl	12.3	32.5	64.0	92.6	127.3	149.5	167.0	180.5		187.2	52.0	
fluoride	C ₂ H ₅ F	-32.0	-16.7	+7.7	30.2	57.5	75.7	90.0			102.2	49.6	
formate	C ₃ H ₆ O ₂	54.3	76.0	110.5	142.2	180.0	205.0	225.0			235.3	46.8	
isobutyrate	C ₄ H ₈ O ₂	110.1	135.5	174.2	210.0	253.0	280.0				280.0	30.0	
mercaptan (ethanethiol)	C ₂ H ₅ S	35.0	56.6	90.7	121.9	159.5	184.3	204.7	220.0		225.5	54.2	
methyl ether	C ₂ H ₆ O	7.5	26.5	56.4	84.0	108.0	141.4	160.0			164.7	43.4	
propionate	C ₃ H ₇ O ₂	99.1	123.8	162.7	197.8	240.0	264.5				272.8	33.2	
propyl ether	C ₃ H ₈ O	61.7	85.3	123.1	156.2	197.2	223.0				227.4	32.1	
Ethylene	C ₂ H ₄	-103.7	-90.8	-71.1	-52.8	-29.1	-14.2	-1.5	+8.9		9.6	50.7	
Fluorobenzene	C ₆ H ₅ F	84.7	109.9	148.5	184.4	227.6	257.0	279.3			286.5	44.7	
n-Heptane	C ₇ H ₁₆	98.4	124.8	165.7	202.8	247.5					266.8	26.9	
n-Hexane	C ₆ H ₁₄	68.7	93.0	131.7	166.6	209.4					234.8	29.6	
Hydrogen cyanide (hydrocyanic acid)	HCN	25.9	45.8	75.8	102.7	135.0	153.8	169.9	183.5		183.5	50.0	
Iodobenzene	C ₆ H ₅ I	188.6	220.0	270.0	315.7	371.5	406.0	437.2			448	44.7	
Methane	CH ₄	-161.5	-152.3	-138.3	-124.8	-108.5	-96.3	-86.3			-82.1	45.8	
Methyl acetate	C ₃ H ₆ O ₂	57.8	79.5	113.1	144.2	181.0	205.0	225.0			233.7	46.3	
acetylene (propyne)	C ₃ H ₄	-23.3	-7.1	+19.5	43.8	74.0	94.0	111.5	125.0		128	52.8	
alcohol	C ₃ H ₈ O	64.7	84.0	112.5	138.0	167.8	186.5	203.5	214.0	224.0	240.0	78.7	
Methylamine	CH ₃ N	-6.3	+10.1	36.0	59.5	87.8	106.3	121.8	133.7	144.6	156.9	73.6	
Methyl bromide	CH ₃ Br	3.6	23.3	54.8	84.0	121.7	147.5	170.2	190.0		194	51.6	
butyrate	C ₄ H ₈ O ₂	102.3	127.5	166.7	203.0	244.5	272.0				281.2	34.2	
chloride	CH ₃ Cl	-24.0	-6.4	+22.0	47.3	77.3	97.5	113.8	126.0	137.5	143.8	65.8	
fluoride	CH ₃ F	-78.2	-64.5	-42.0	-21.0	+2.6	15.5	26.5	36.0	43.5	44.9	62.0	
formate	C ₂ H ₄ O ₂	32.0	51.9	83.5	112.0	147.2	169.7	188.5	213.0		214.0	59.1	
iodide	CH ₃ I												

VAPOR PRESSURES

TABLE G.1 Vapor Pressures of Various Substances

Antoine equation:

$$\ln(p^*) = A - \frac{B}{C + T}$$

where p^* = vapor pressure, mm Hg

T = temperature, K

A, B, C = constants

Name	Formula	Range (K)	A	B	C
Acetic acid	C ₂ H ₄ O ₂	290–430	16.8080	3405.57	–56.34
Acetone	C ₃ H ₆ O	241–350	16.6513	2940.46	–35.93
Ammonia	NH ₃	179–261	16.9481	2132.50	–32.98
Benzene	C ₆ H ₆	280–377	15.9008	2788.51	–52.36
Carbon disulfide	CS ₂	288–342	15.9844	2690.85	–31.62
Carbon tetrachloride	CCl ₄	253–374	15.8742	2808.19	–45.99
Chloroform	CHCl ₃	260–370	15.9732	2696.79	–46.16
Cyclohexane	C ₆ H ₁₂	280–380	15.7527	2766.63	–50.50
Ethyl acetate	C ₄ H ₈ O ₂	260–385	16.1516	2790.50	–57.15
Ethyl alcohol	C ₂ H ₆ O	270–369	18.5242	3578.91	–50.50
Ethyl bromide	C ₂ H ₅ Br	226–333	15.9338	2511.68	–41.44
<i>n</i> -Heptane	C ₇ H ₁₆	270–400	15.8737	2911.32	–56.51
<i>n</i> -Hexane	C ₆ H ₁₄	245–370	15.8366	2697.55	–48.78
Methyl alcohol	CH ₄ O	257–364	18.5875	3626.55	–34.29
<i>n</i> -Pentane	C ₅ H ₁₂	220–330	15.8333	2477.07	–39.94
Sulfur dioxide	SO ₂	195–280	16.7680	2302.35	–35.97
Toluene	C ₆ H ₅ CH ₃	280–410	16.0137	3096.52	–53.67
Water	H ₂ O	284–441	18.3036	3816.44	–46.13

SOURCE: R. C. Reid, J. M. Prausnitz, and T. K. Sherwood. *The Properties of Gases and Liquids*, 3rd ed., Appendix A. New York: McGraw-Hill, 1977.