APPENDIX H

Vapor Pressures

Table H.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	$C_2H_4O_2$	290–430	16.8080	3405.57	–56.34
Acetone	C_3H_6O	241–350	16.6513	2940.46	–35.93
Ammonia	NH_3	179–261	16.9481	2132.50	–32.98
Benzene	C_6H_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_6H_{12}	280–380	15.7527	2766.63	–50.50
Ethyl acetate	$C_4H_8O_2$	260–385	16.1516	2790.50	–57.15
Ethyl alcohol	C_2H_6O	270–369	18.5242	3578.91	–50.50
Ethyl bromide	C_2H_5Br	226–333	15.9338	2511.68	–41.44
n-Heptane	C_7H_{16}	270–400	15.8737	2911.32	–56.51
n-Hexane	C_6H_{14}	245–370	15.8366	2697.55	–48.78
Methyl alcohol	CH_4O	257–364	18.5875	3626.55	–34.29
n-Pentane	C_5H_{12}	220–330	15.8333	2477.07	–39.94
Sulfur dioxide	SO_2	195–280	16.7680	2302.35	–35.97
Toluene	$C_6H_5CH_3$	280–410	16.0137	3096.52	–53.67
Water	H_2O	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*, 3d ed., Appendix A, McGraw-Hill, New York (1977).