

List of useful references for Thermodynamics and Data at MSU
(updated 2006, however some journals have been discontinued)

B – Biomed-Phys-Sci library; E – Engineering library; M – Main Library

	Library	Call Number
GENERAL REFERENCES		
Boublik, Tomas, <i>The Vapor Pressure of Pure Substances</i> , Elsevier Scientific Publishing Co., New York, 1984.	B	QC 304.B71984
Callen, H.B., <i>Thermodynamics</i> , John Wiley, New York, 1961. (A physics text with a good discussion of stability.)	E	QC 311.C25
Christensen, J.J., Hanks, R.W., Izatt, R.M., <i>Handbook of Heats of Mixing</i> , John Wiley, New York, 1982. (data)	B	TP 156f.M5C48
Chu, Ju-Chin, <i>Distillation Equilibrium Data</i> , New York, Reinhold, 1950. (Good summary of older VLE data).	E	TP 156.D5C45
Dymond, J.H., Smith, E.B., <i>The Virial Coefficients of Pure Gases and Mixtures--A Critical Compilation</i> , Oxford University Press, New York, 1980	B	QC 286.D91980
Edwards, J.W., Chu, J., Wang, S.L., Levy, S., Paul, R., <i>Vapor-Liquid Equilibrium Data</i> , Ann Arbor, Mich., J. W. Edwards [1956]. (Good summary of data up to 1956).	E	TP 156.D5C45
Francis, A.W., <i>Critical Solution Temperatures</i> , Advances in Chemistry Series, No. 31, American Chemical Society, Washington, D.C., 1961. (Collection of LLE data.)	B	QD 1.A355 v.31
Francis, A.W., <i>Liquid-Liquid Equilibriums</i> , Interscience, New York, 1963. (A collection of LLE data).	E	QD 501.F727

	Library	Call Number
<p>Fredenslund, A., Gmehling, J., Rasmussen, P., <i>Vapor-Liquid Equilibrium using UNIFAC</i>, Elsevier Scientific Publishing Co., New York, 1977.</p> <p>(A good collection of data – much in the Gmehling reference – with comparison of the original UNIFAC model.)</p>	E	TP 156.E65F73
<p>Gaskell, D.R., <i>Introduction to Metallurgical Thermodynamics</i>, McGraw-Hill, New York, 1981.</p> <p>(Contains a good introduction to cubic equations of state, and thermodynamics of metallic solutions.)</p>	E	TN 673.G33 1981
<p>Gmehling, J., Oken, U., <i>Vapor-Liquid Equilibrium Data Collection</i>, DECHEMA, Frankfurt, W. Germany, 1977.</p> <p>(A primary reference for data and activity parameters for common mixtures.)</p>	B	TP 156.E65G57
<p>Haile, J.M., Mansoori, G.A., <i>Molecular-based Study of Fluids</i>, Advances in Chemistry Series, No. 204, American Chemical Society, Washington, D.C., 1983.</p> <p>(Symposium series with model development and applications.)</p>	B	QD 1.A355 v.204
<p>Hildebrand, Prauznitz, Scott, <i>Regular and Related Solutions</i>, Van Nostrand Reinhold, 1970.</p> <p>(A textbook that shows development and applications of Scatchard-Hildebrand model.)</p>	E	QD541 .H5 1970
<p>Hirschfelder, J.O., Curtiss, C.F., Bird, R.B., <i>Molecular Theory of Gases and Liquids</i>, John Wiley, New York, 1964.</p> <p>(A substantial text on applied physics and chemistry. A standard for its time.)</p>	B	QC 173.H541964
<p>Horsley, L.H. <i>Azeotropic Data-III</i>, Advances in Chemistry Series, No. 116, American Chemical Society, Washington, D.C., 1973.</p> <p>(data).</p>	B	QD 1.A355 v. 116
<p>Kojima, K., Tochigi, K., <i>Prediction of Vapor-Liquid Equilibria by the ASOG Method</i>, Elsevier Scientific Publishing Company, New York, 1979.</p> <p>(An option to UNIFAC that is not as widely used.)</p>	E	QD 503.K64
<p>Kyle, B.G., <i>Chemical and Process Thermodynamics</i>, Prentice-Hall, Englewood Cliffs, N.J., 1984.</p> <p>(Undergraduate textbook, newer edition exists.)</p>	E	QD 504.K94 1984

	Library	Call Number
Lewis, G.N., Randall, M., <i>Thermodynamics</i> , McGraw-Hill, New York, 1961. (Old textbook by the chemist who first defined fugacity)	E	QC 311.L4 1961
Levin, E.M., et al., <i>Phase Diagrams for Ceramicists</i> , American Ceramic Society, Columbus, Ohio, 1969, 1975. (ceramic phase diagrams)	E	QD 501f.L592
Moffat, W.G., <i>Binary Phase Diagrams Handbook</i> , General Electric Company, Schenectady, N.Y., 1976. (metallic phase diagrams)	E	TA 483.M64
Prauznitz, J.M., <i>Molecular Thermodynamics of Fluid-Phase Equilibria</i> , Prentice-Hall, New York, 1969. (A newer edition exists for this graduate textbook)	E	QC 319.P7
Reid, Prauznitz, Sherwood, <i>The Properties of Gases and Liquids</i> , 3rd Ed., McGraw-Hill, New York, 1977. (Good summary of estimation methods – but use a newer edition)	E	TP 242.R4 1977
Rowlinson, <i>Liquids and Liquid Mixtures</i> , 3rd Ed., Butterworths, London, 1982. (Textbook)	E	QC147 .R65 1969
Sorenson, J.M., Arlt, W., <i>Liquid-Liquid Equilibrium Data Collection</i> , DECHEMA, Frankfurt, W. Germany, 1979. (good collection of data and activity parameters for common mixtures)	B	QD 503.S67
Tamir, A., Tamir, E., Stephan, K., <i>Heats of Phase Change of Pure Components and Mixtures</i> , Elsevier, New York, 1983. (data)	B	QD 504.T351983
Tassios, D.P., <i>Extractive and Azeotropic Distillation</i> , Advances in Chemistry Series, No. 115, American Chemical Society, Washington, D.C., 1972. (Papers from a symposium)	B	QD 1.A355 v.115
Timmermans, J., <i>The Physicochemical Constants of Binary Systems</i> , Interscience, New York, 1959. (Handbook with properties and some mixture data)	B	QD 453.T56

	Library	Call Number
Van Ness, H.C.; Abbott, M.M. Schaum's Outline of Thermodynamics With Chemical Applications (Schaum's Outline Series) McGraw-Hill, 1989. (Examples and worked problems).	E	TJ265 .A19 1989
Van Ness, H.C., Abbott, M.M., Classical Thermodynamics of Nonelectrolyte Solutions, McGraw-Hill, New York, 1982. (Textbook)	B	QC 311.V241982
Wisniak, J., Liquid-Liquid Equilibrium and Extraction: A Literature Source Book, Elsevier Scientific Publishing Company, New York, 1980. (Tabulation of references to journal publications with data).	B	QD 503.W57
Wisniak, J., Phase Diagrams: A Literature Source Book, Elsevier, New York, 198?. (Tabulation of references to journal publications with data).	M	QD 503.W575
Wisniak, J., Solubility of Gases and Solids: A Literature Source Book, Elsevier Scientific Publishing Co., New York, 1984. (Tabulation of references to journal publications with data).	B	Z 5524.S64W57 1984
PERIODICALS		
AIChE Journal	E	TP 1.A634
Fluid Phase Equilibria	E	
Industrial and Engineering Chemistry Fundamentals	E	TP 155.A1I62
J. of Chemical and Engineering Data	B	QD 1.J92
J. of Chemical Thermodynamics	B	QC 501.J63
J. of Molecular Liquids	B	QC 173.A2544
J. of Non-Equilibrium Thermodynamics	E	QC 310.15.J6
J. of Physical Chemistry	B	QD 453.A1J85
J. of Physical and Chemical Reference Data	B	QC 81.J6
J. of Research of the National Bureau of Standards	B	QC 100.U6U5

	Library	Call Number
J. of Solution Chemistry	B	QD 541.J6