

Vapor–Liquid Equilibria of Alkanes: 2-Propoxyethanol Systems

M.S. Shin,^{1,S} S. Jung,¹ J.H. Lee,² C.S. Lee,² H. Kim^{1,C}

¹*School of Chemical and Biological Engineering, Seoul National University, Seoul, Korea
hwayongk@snu.ac.kr*

²*Department of Chemical and Biological Engineering, Korea University, Seoul, Korea*

Surfactant systems, especially micelle and microemulsion systems, display highly non-ideal behavior due to hydrogen bonding and hydrophobic interaction. Alkoxyethanols are a very interesting class of substances from a theoretical point of view, due to the strong intramolecular effects related to the O and OH groups present in the same molecule.

Total pressure measurements are reported for n-hexane + 2-propoxyethanol at 323.15, 333.15, and 343.15 K, and n-heptane + 2-propoxyethanol at 323.15, 333.15, and 343.15 K. Experimental results were obtained by using a Van Ness apparatus. Modeling of the experimental data has been performed using the lattice fluid equation of state for intramolecular and intermolecular hydrogen bonding and the statistical associating fluid theory (SAFT).