

Vapor-Liquid Equilibria of the Alkanes + 2 Butoxyethanol Systems

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Surfactants systems, especially micelle and microemulsion systems, was highly non-ideal behavior due to the hydrogen bonding and hydrophobic interaction. Alkoxyethanols are a very interesting class of substances, in a theoretical point of view due to the strong intra-molecular effects related to the presence of the O and OH groups in the same molecule.

Total pressure measurements are reported for (n-cyclohexane-2-butoxyethanol) at 303.15, 313.15, and 323.15 K, and (n-heptane-2-butoxyethanol) at 313.15, 323.15, and 333.15 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 intra-molecular and intermolecular hydrogen bonding and the statistical associating fluid theory (SAFT).