

Isothermal Vapour-Liquid Equilibria of Binary Mixtures of 1, 2-Dichloroethane with Some Cyclic Ethers: Experimental Results and Modelling

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Abstract : The vapour pressures of the three binary mixtures: 1, 2- dichloroethane + 1,3-dioxolane, + 1,4-dioxane or + tetrahydropyrane, are carried out at ten temperatures ranging from 273 to 353.15 K. An accurate static device was employed for these measurements. The VLE data were reduced using the Redlich-Kister equation by taking into consideration the vapour pressure non-ideality in terms of the second molar virial coefficient. The experimental data were compared to the results predicted with the DISQUAC and Dortmund UNIFAC group contribution models for the total pressures P and the excess molar Gibbs energies GE.

Keywords : disquac model, dortmund UNIFAC model, excess molar Gibbs energies GE, VLE

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