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Isothermal vapour-liquid equilibria for the dimethyl sulfoxide + 1,4-dimethyl benzene binary mixture. Experimental and correlated data

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Abstract Vapour-liquid equilibria PTX for the 1,4-dimethylbenzene + dimethyl sulfoxide binary system were obtained by the static method, with a glass isoteniscope of the Smith and Menzies type, at the temperatures 303.15 K and 313.15 K. The excess Gibbs energy and activity coefficients were obtained and compared with experimental data existing in the literature at 313.15 K. The system reveals strong positive deviations from Raoult's low. The experimental data were correlated using the Wilson and NRTL models; the group contribution methods, original UNIFAC and modified UNIFAC-Dortmund, were also applied.

Keywords: vapour-liquid equilibria, 1,4-dimethylbenzene, dimethyl sulfoxide, prediction

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