Vapor-liquid equilibria for the binary mixtures of cyclopentene + cyclopentyl methyl ether

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Isothermal vapor-liquid equilibrium data for the binary system of cyclopentene+ cyclopentyl methyl ether were measured at 303.15, 313.15, and 323.15 K using a circulation-type equilibrium apparatus with on-line gas chromatography analysis. The experimental data were correlated with the Peng-Robinson equation of state (PR-EoS) using the van der Waals one fluid mixing rule and the Peng-Robinson equation of state (PR-EoS) using the Wong-Sandler mixing rule combined with the NRTL excess Gibbs free energy model. Calculated results with PR-EoS using both two mixing rules showed good agreement with experimental data.