Isothermal (vapor + liquid) equilibria and excess enthalpy data of {1-hexene + methyl butyl ether (MBE)} and {1-hexene + methyl tert-butyl ether (MTBE)} binary systems at several temperatures

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Abstract :

The vapor pressures of {1-hexene + methyl butyl ether (MBE)} and {1-hexene + methyl tert-butyl ether (MTBE)} binary mixtures and of the three pure components were measured by means of a static device at temperatures between (263 and 333) K. The data were correlated with the Antoine equation. From these data, excess Gibbs functions were calculated for several constant temperatures and fitted to a third-order Redlich–Kister equation using the Barker's method. Additionally, molar excess enthalpies, HE, for the two binary systems have been measured at 303.15 K using an isothermal flow calorimeter.

Keywords :

(Vapor + liquid) equilibria; 1-Hexene; Ether; Excess Gibbs free energy; Excess enthalpy.

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