Densities and Viscosities of Binary Mixture Containing Diethylamine and 2-Alkanol

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Abstract : Densities and viscosities for binary mixtures of diethylamine + 2 Alkanol (2 propanol up to 2 pentanol) were measured over the entire composition range and temperature interval of 293.15 to 323.15 K. Excess molar volumes V_m^E and viscosity deviations $\Delta\eta$ were calculated and correlated by the Redlich–Kister type function to derive the coefficients and estimate the standard error. For mixtures of diethylamine with used 2-alkanols, V_m^E and $\Delta\eta$ are negative over the entire range of mole fraction. The observed variations of these parameters, with alkanols chain length and temperature, are discussed in terms of the inter-molecular interactions between the unlike molecules of the binary mixtures.

Keywords: densities, viscosities, diethylamine, 2-alkanol, Redlich-Kister

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