

Viscosity and density of binary and ternary systems with water, 1,4-dioxane and diethylene glycol at 298.15

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Abstract Viscosities and densities of three binary liquid mixtures (water+1,4-dioxane, water+diethylene glycol, and 1,4-dioxane+diethylene glycol) as well as of the corresponding ternary mixture (water+1,4-dioxane+diethylene glycol) were measured at 298.15K over the whole range of mixture compositions. Experimental data for the binary and ternary mixtures were correlated by means of some models (Soliman, Heric, and NRTL/ V 2). Predicted viscosities agree well with the experimental measurements. The excess properties of the binary and ternary systems above mentioned were fitted by means of the Redlich–Kister's equation.

Keywords: Viscosity, density, binary and ternary mixtures, excess functions
