

## Viscosities, densities and corresponding excess properties of systems with water, 1,4-dioxane and diethylene glycol at 303.15K

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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 303.15K over the whole range of mixture compositions. Experimental data for the binary and ternary mixtures were correlated by means of Soliman, Heric, and NRTL/ $V^2$  models. Predicted viscosities agree well with the experimental measurements. The excess properties of the binary and ternary systems above mentioned were calculated and fitted by means of the Redlich–Kister's equation.

*Keywords:* Viscosity, density, correlation and prediction, excess functions

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