

Densities and refractive index for the ternary system of PVE + 1-Propanol + Toluene
and the binary
sub-systems

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Aqueous solutions of this sulfomethylated copolymer are useful in increasing the viscosity of drive fluids used in the supplemented recovery of petroleum from subterranean formations. Alkyl vinyl ethers are used increasingly as industrial solvents and chemical intermediates in the chemical or pharmaceutical industry. For the synthesis and separation of these compounds, reliable physical properties and phase equilibrium data are required. However, relatively few investigations have been reported for alkyl vinyl ether compounds and there is no data for propyl vinyl ether (PVE) as far as we know. In this work, densities and refractive index at 298.15 K are reported for the binary systems of Propyl vinyl ether (PVE) + 1-Propanol, 1-Propanol + Toluene and PVE + Toluene, and also for the ternary system PVE + 1-Propanol + Toluene. The excess molar volumes and changes of refractive index of the binary and ternary systems were derived and correlated with the Redlich-Kister and Cibulka equation.