

Phase Behavior for the Poly(2-butoxyethyl acrylate) + Supercritical Solvents + Cosolvents
and Carbon Dioxide + Butoxyethyl acrylate Mixtures

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Experimental cloud-point curves of binary and ternary mixtures for poly(butoxyethyl acrylate) [P(BEA)] in supercritical carbon dioxide, dimethyl ether (DME), propane, propylene, butane and 1-butene were measured at temperature range of (40 ~ 180)°C and pressures up to 2243 bar. Cloud-point behavior of those systems were showed in changed of the pressure-temperature (P-T) when solvent content was changed. Also, experimental data of phase behaviors for BEA in supercritical carbon dioxide was performed at temperature range of (40 ~ 120)°C and pressure range of 47 ~ 204 bar. The experimental results were modeled with the Peng-Robinson equation of state with two adjustable parameters.