

RESEARCH PAPERS

超(亚)临界CO₂中涂料基体的相行为研究

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摘要 The high-pressure phase behavior of coating-solvent-supercritical or sub-critical carbon dioxide system was investigated experimentally. The coating matrix used was 108-acrylic resin at concentration ranging from 10% to 50% (by mass) in mixtures with n-butyl acetate. The experiments were conducted in a high-pressure view cell for temperatures from 35°C to 65°C and for pressures from 3.0 MPa to 8.0 MPa. The effect of temperature, pressure and content of every component on the phase behavior of the systems was observed. Finally, the ternary phase diagram for resin-solvent-CO₂ was plotted.

关键词 [phase behavior](#) [supercritical CO₂](#) [coating matrix](#)

分类号

Study on the Phase Behavior of Coating Matrix in Supercritical or Sub-critical Carbon Dioxide

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Abstract

The high-pressure phase behavior of coating-solvent-supercritical or sub-critical carbon dioxide system was investigated experimentally. The coating matrix used was 108-acrylic resin at concentration ranging from 10% to 50% (by mass) in mixtures with n-butyl acetate. The experiments were conducted in a high-pressure view cell for temperatures from 35°C to 65°C and for pressures from 3.0 MPa to 8.0 MPa. The effect of temperature, pressure and content of every component on the phase behavior of the systems was observed. Finally, the ternary phase diagram for resin-solvent-CO₂ was plotted.

Key words [phase behavior](#) [supercritical CO₂](#) [coating matrix](#)

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