

THE VAN DER WAALS MODEL
AND THE APPROXIMATE EQUATION
OF STATE FOR A BINARY SOLUTION
NEAR ITS STRATIFICATION TEMPERATURE

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S u m m a r y

On the basis of the van der Waals model, an extended equation of state for binary solutions near their critical stratification temperature has been proposed, the parameters of which have a definite physical meaning. The equation has been used to analyze the temperature dependence of the concentration of some binary solutions nitrobenzene + alkane in terms of different order parameters. It has been shown that the mole concentration of the solutions has to be used as the order parameter for the systems under study. The parameters of the extended equation of state for the mole concentration have been demonstrated to be linear functions of the number of carbon atoms in alkanes. For the volume and mass concentrations, the dependences of those parameters on the number of carbon atoms in alkanes is very weak.