

Molecular Correlation Study Of Pentenenitrile With 1,2 Dichloroethane at 15⁰C Temperature

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ABSTRACT

The dielectric relaxation study of 2-pentenenitrile(PN) with 1, 2 Dichloroethane (DCE) mixture has been carried out at temperature 150C in the frequency range of 10 MHz to 20 GHz using time domain reflectometry (TDR) for 11 different concentrations of the system. The dielectric parameters such as static dielectric constant (ϵ_0) and relaxation time (τ) have been obtained by fourier transform and the least squares fit method. Kirkwood correlation factor (g_f) and effective Kirkwood correlation factor (g^{eff}) of the mixtures have been determined. In the mixtures the values of g^{eff} are less than one and it shows that there is antiparallel alignment of dipoles

Keywords: Dielectric, Kirkwood Parameters, Excess parameters, nitrile.