

Excess Molar Enthalpies of Binary Mixtures of 1,2-dichloropropane with methanol, or ethanol at T=298.15K

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Excess molar enthalpies H^E have been measured for the binary mixtures {1,2-dichloropropane + methanol} and {1,2-dichloropropane + ethanol} by means of an isothermal microcalorimeter with a flow mixing cell at the temperature 298.15K under atmospheric pressure. The mixtures show an endothermic effect(positive values) which increases with the increase of the chain length of alkanols. These positive values are in good agreement with breaking of hydrogen bonding of alkanol during mixing. The maximum H^E values of these mixtures are shown to be about 741.077 J·mol⁻¹ at $x_1 = 0.722$ and 944.172 J·mol⁻¹ at $x_1 = 0.702$ respectively. The experimental results of excess molar enthalpies H^E were correlated using Redlich-Kister equation by Nelder-Mead's simplex pattern search method. No literature for the excess enthalpies of these mixtures was found.