

## The Lower Flash Points for n-Hexanol+ propionic acid System Using Seta-flash Closed Cup Tester

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The purpose of this study was to measure and predict the lower flash points for the binary mixtures to aid in evaluating the safety of flammable liquid mixtures. The lower flash points for the three binary solutions, n-hexanol+ propionic acid, was measured by Seta-flash closed tester, and correlated with Wilson equation and UNIQUAC[9] equation using binary interaction parameters. The calculated flash points based on the optimization method using the Wilson and UNIQUAC equations are very similar to the experimental data. However, the predictive curves based on the Willson equation described the experimentally-derived data more effectively than those based on the UNIQUAC. The prediction method in this study can thus be applied to incorporate inherently safer design for chemical processes, such as the determination of the safe storage conditions for highly non-ideal solutions containing flammable components.