

### Lower Flash Points of n-Propanol+ Acetic Acid System Using Closed-Cup Apparatus(ASTM 93D)

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The flash point is the best known and most widely used flammability property for the evaluation of the flammability hazard of combustible liquids. It is an important criterion for the fire-hazard rating of these liquids. The lower flash points for n-propanol+ acetic acid system were measured by Pensky-Martens closed cup tester(ASTM 93D). The experimental results showed the minimum in the flash point versus composition curve. The experimental data were compared with the values calculated by the reduced model under an ideal solution assumption and the flash point-prediction models based on the Van Laar and Wilson equations. The experimental results were in good agreement with the predictive curves, which use the reduced model under an ideal solution assumption. The prediction results of this model can thus be applied to incorporate inherently safer design for chemical processes, such as the determination of the safe storage conditions fo ideal solutions containing flammable components.