

Table S1. The Densities of Diethyl Malonate at Different Temperature with the Standard Deviation (*SD*)

$\frac{T}{\text{K}}$	$\frac{\rho}{(\text{g} \cdot \text{cm}^{-3})}$	$\frac{SD}{(\text{g} \cdot \text{cm}^{-3})}$	$\frac{T}{\text{K}}$	$\frac{\rho}{(\text{g} \cdot \text{cm}^{-3})}$	$\frac{SD}{(\text{g} \cdot \text{cm}^{-3})}$
278.15	1.071036	0.000011	328.15	1.017336	0.000010
288.14	1.060326	0.000007	338.15	1.006505	0.000015
298.15	1.049603	0.000006	348.15	0.995631	0.000010
313.15	1.033498	0.000007	358.15	0.984697	0.000021

Table S2. The Density of Alcohols^a

$\frac{T}{\text{K}}$	$\frac{\rho}{(\text{g} \cdot \text{cm}^{-3})}$	$\frac{T}{\text{K}}$	$\frac{\rho}{(\text{g} \cdot \text{cm}^{-3})}$
Methanol			
288.2	0.7960	313.2	0.7728
298.2	0.7867	328.2	0.7591
Ethanol			
288.2	0.7935	313.2	0.7724
298.2	0.7852	328.2	0.7593
1-Propanol			
288.2	0.8078	313.2	0.7874
298.2	0.7998	328.2	0.7746
2-Propanol			
288.2	0.7893	313.2	0.7683
298.2	0.7811	328.2	0.7549

^a taken from DDB.

Table S3. The Structural Parameters of Pure Component q_i

component	Methanol	Ethanol	1-Propanol	2-Propanol	Diethyl Malonate
q_i	1.432 ^a	1.972 ^a	2.512 ^a	2.508 ^a	5.861 ^b

^a taken from DDB. ^b calculated from Gmehling et al., 1993.