|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | density / g·cm3 | | | | | | AAD% | | | | | | | |
| T/K | present work | Ref 14 |  |  |  |  | Ref 14 |  | |  | |  | |  |
| 303.15 | 0.84460 | 0.8446 |  |  |  |  | 0.000 |  | |  | |  | |  |
| 308.15 | 0.84041 | 0.8404 |  |  |  |  | 0.001 |  | |  | |  | |  |
| 313.15 | 0.83591 | 0.8359 |  |  |  |  | 0.001 |  | |  | |  | |  |
| speed of sound / m·s-1 | | | | | | |  | | | | | | | |
| 303.15 | 1404 |  |  |  |  |  |  |  | |  | |  | |  |
| 308.15 | 1384 |  |  |  |  |  |  |  | |  | |  | |  |
| 313.15 | 1364 |  |  |  |  |  |  |  | |  | |  | |  |
| viscosity **/** mPa·s | | | | | | |  | | | | | | | |
|  |  | Ref 15 |  |  |  |  | Ref 15 |  |  | |  | |  | |
| 303.15 | 1.122 | 1.127 |  |  |  |  | 0.444 |  |  | |  | |  | |
| 308.15 | 1.019 | 1.016 |  |  |  |  | -0.295 |  |  | |  | |  | |
| 313.15 | 0.921 | 0.921 |  |  |  |  | 0.000 |  |  | |  | |  | |

Tab 1s: Comparison between density and speed of sound of allyl alcohol with references 14 viscosity of allyl alcohol with

Reference 15 at various temperatures

Tab 2s: Comparison between density of acetic acid with references 18, 16, 17, 24, 20 and 19, speed of sound of acetic acid with references 18, 16 and 24, viscosity of acetic acid with references 29 and 13 at various temperatures.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | density g/cm3 | | | | | | | | | | AAD % | | | | | | |
| T/K | present work | Ref 18 | Ref 16 | | Ref 17 | Ref 24 | Ref 20 | Ref 19 | |  | Ref 18 | Ref 16 | Ref 17 | Ref 24 | Ref 20 | Ref 19 |  |
| 303.15 | 1.03832 | 1.03800 | 1.03848 | | 1.0371 | 1.03834 |  |  | |  | 0.042 | 0.004 | 0.129 | 0.010 |  |  |  |
| 308.15 | 1.03246 |  | 1.03283 | | 1.0314 | 1.03268 | 1.3252 | 1.03256 | |  |  | 0.021 | 0.117 | 0.007 | 22.07 | 0.005 |  |
| 313.15 | 1.02712 |  | 1.02718 | | 1.0258 | 1.02703 |  |  | |  |  | 0.014 | 0.121 | 0.001 |  |  |  |
| speed of sound m.s-1 | | | | | | | | | | | AAD % | | | | | | |
| 303.15 | 1117.5 | 1115.0 | | 1118.4 |  | 1117.0 |  |  |  | | 0.022 | 0.080 | 3.060 | 0.045 |  |  |  |
| 308.15 | 1102.4 |  | | 1101.2 |  | 1102.0 |  |  |  | |  | 0.054 | 0.000 | 0.127 |  |  |  |
| 313.15 | 1084.4 |  | | 1084.0 |  | 1082.0 |  |  |  | |  | 0.028 |  | 0.157 |  |  |  |
| viscosity **/** mPa·s | | | | | | | |  | | | AAD % | | | | | | |
| T/K | present work | Ref 29 | | Ref 13 |  |  |  |  |  | | Ref 29 | Ref 13 |  |  |  |  |  |
| 303.15 | 1.041 | 1.046 | | 1.024 |  |  |  |  |  | | 0.478 | 1.66 |  |  |  |  |  |
| 308.15 | 0.977 | 0.974 | |  |  |  |  |  |  | | 0.308 |  |  |  |  |  |  |
| 313.15 | 0.913 | 0.909 | |  |  |  |  |  |  | | 0.440 |  |  |  |  |  |  |

Tab 3s: Comparison between of propanoic acid with references 22, 16, 17, 24 and 21, speed of sound of propionic with references 22, 16, 24 and 21, viscosity of propanoic acid with references 27 and 13 at various temperatures.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | density g/cm3 | | | | | | | | | AAD % | | | | | | |
| T/K | present work | Ref 22 | | Ref 16 | Ref 17 | Ref 24 | | Ref 21 |  | | Ref 22 | Ref 16 | Ref 17 | Ref 24 | Ref 21 |  |
| 303.15 | 0.98326 | 0.9831 | | 0.98254 | 0.9829 | 0.98284 | | 0.98307 |  | | 0.002 | 0.059 | 0.022 | 0.028 | -0.005 |  |
| 308.15 | 0.97782 | 0.9777 | | 0.97714 | 0.9774 | 0.97751 | | 0.97767 |  | | 0.001 | 0.056 | 0.030 | 0.018 | -0.002 |  |
| 313.15 | 0.97245 | 0.9723 | | 0.97175 | 0.9721 | 0.97217 | | 0.97227 |  | | 0.005 | 0.051 | 0.015 | 0.008 | 0.002 |  |
| speed of sound m.s-1 | | | | | | | | | | | AAD % |  | |  |  |  |
| T/K | present work | Ref 22 | Ref 16 | | Ref 24 | | Ref 21 |  |  | | Ref 22 | Ref 16 | Ref 24 | Ref 21 |  |  |
| 303.15 | 1127.5 | 1128 | 1127.1 | |  | | 1127.7 |  |  | | 0.044 | 0.035 |  | 0.018 |  |  |
| 308.15 | 1108.2 | 1109 | 1108.3 | | 1110 | | 1108.9 |  |  | | 0.072 | 0.009 | 0.162 | 0.063 |  |  |
| 313.15 | 1089.9 | 1090 | 1089.6 | |  | | 1090.2 |  |  | | 0.009 | 0.028 |  | 0.028 |  |  |
| viscosity **/** mPa·s | | | | | | | | |  | | AAD % | | | |  |  |
| T/K | present work |  | Ref 27 | | Ref 13 | |  |  |  | |  | Ref 27 | Ref 13 |  |  |  |
| 303.15 | 0.959 |  | 0.96 | | 0.974 | |  |  |  | |  | 0.104 | 1.540 |  |  |  |
| 308.15 | 0.887 |  | 0.89 | |  | |  |  |  | |  | 0.337 |  |  |  |  |
| 313.15 | 0.814 |  | 0.84 | |  | |  |  |  | |  | 3.095 |  |  |  |  |

Tab 4s: Comparison between density and viscosity of butanoic acid with references 21 and 26, speed of sound of butanoic acid with reference 21, viscosity of of butanoic acid with reference 28 at various temperatures

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | density / g·cm3 | | | | | | | AAD % | | | | | |
| T/K | present work |  | | Ref 21 | Ref 26 |  |  | Ref 21 | Ref 26 |  | |  |  |
| 303.15 | 0.94792 |  | | 0.94784 |  |  |  | 0.005 |  |  | |  |  |
| 308.15 | 0.94293 |  | | 0.94287 |  |  |  | 0.034 |  |  | |  |  |
| 313.15 | 0.93792 |  | | 0.93791 | 0.9379 |  |  | 0.069 | 0.070 |  | |  |  |
| speed of sound / m·s-1 | | | | | | | | AAD % | | | | | |
| T/K | present work |  | Ref 21 | |  |  |  | Ref21 |  |  |  | |  |
| 303.15 | 1159.0 |  | 1158.2 | |  |  |  | 0.069 |  |  |  | |  |
| 308.15 | 1140.1 |  | 1139.6 | |  |  |  | 0.044 |  |  |  | |  |
| 313.15 | 1122.0 |  | 1121.3 | |  |  |  | 0.062 |  |  |  | |  |
| viscosity **/** mPa·s | | | | | | | | AAD % | | | | | |
| T/K | present work |  | Ref 28 | |  |  |  | Ref 28 |  |  |  | |  |
| 303.15 | 1.386 |  |  | |  |  |  |  |  |  |  | |  |
| 308.15 | 1.243 |  | 1.2421 | |  |  |  | 0.072 |  |  |  | |  |
| 313.15 | 1.099 |  |  | |  |  |  |  |  |  |  | |  |

**Table 5S:** Density (), excess molar volumes (*VE*), speed of sound (*u*), excess isentropic compressibility (*κsE*), viscosity (η), deviation in viscosity (*Δη*) and excess Gibbs energy of activation of viscous flow (*G\*E*) as a function of mole fraction, *x*1 of allyl alcohol of binary liquid mixtures at *T*= (303.15 to 313.15) K and 0.1MPa pressure.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *x*1 | density(ρ)  g·cm−3 | cm3··mol-1 | *u* m.s-1 | **/**TPa-1 | viscosity (η / mPa·s) | *Δη* / mPa·s | *Δ*G\*E / J··mol-1 |
| allyl alcohol (1)+ butanoic acid (2) | | | | | | | |
|  |  |  | 303.15 K |  |  |  |  |
| 0.0000 | 0.94792 | 0.0000 | 1159.0 | 0.000 | 1.385 | 0.000 | 0.000 |
| 0.1306 | 0.93797 | -0.0367 | 1179.4 | -9.641 | 1.341 | -0.010 | -0.011 |
| 0.2526 | 0.92787 | -0.0577 | 1197.6 | -15.47 | 1.302 | -0.016 | -0.025 |
| 0.3668 | 0.91766 | -0.0673 | 1213.9 | -18.21 | 1.268 | -0.021 | -0.046 |
| 0.4740 | 0.90736 | -0.0688 | 1228.8 | -18.55 | 1.237 | -0.023 | -0.062 |
| 0.5748 | 0.89700 | -0.0649 | 1242.5 | -17.12 | 1.211 | -0.023 | -0.072 |
| 0.6697 | 0.88659 | -0.0571 | 1255.5 | -14.46 | 1.188 | -0.021 | -0.062 |
| 0.7593 | 0.87614 | -0.0462 | 1268.2 | -11.06 | 1.168 | -0.017 | -0.058 |
| 0.8439 | 0.86565 | -0.0325 | 1280.8 | -7.315 | 1.150 | -0.013 | -0.054 |
| 0.9240 | 0.85513 | -0.0163 | 1293.6 | -3.540 | 1.135 | -0.007 | -0.022 |
| 1.0000 | 0.84460 | 0.0000 | 1307.0 | 0.000 | 1.122 | 0.000 | 0.000 |
| 308.15 K | | | | | | | |
| 0.0000 | 0.94293 | 0.0000 | 1140.1 | 0.000 | 1.242 | 0.000 | 0.000 |
| 0.1306 | 0.93310 | -0.0407 | 1160.6 | -10.54 | 1.204 | -0.009 | -0.015 |
| 0.2526 | 0.92309 | -0.0625 | 1178.4 | -16.26 | 1.170 | -0.015 | -0.051 |
| 0.3668 | 0.91295 | -0.0712 | 1194.5 | -18.92 | 1.140 | -0.020 | -0.090 |
| 0.4740 | 0.90272 | -0.0719 | 1209.0 | -19.07 | 1.114 | -0.022 | -0.115 |
| 0.5748 | 0.89245 | -0.0685 | 1222.7 | -17.67 | 1.092 | -0.022 | -0.123 |
| 0.6697 | 0.88212 | -0.0609 | 1235.9 | -15.18 | 1.073 | -0.020 | -0.114 |
| 0.7593 | 0.87176 | -0.0501 | 1248.7 | -11.93 | 1.056 | -0.016 | -0.088 |
| 0.8439 | 0.86135 | -0.0365 | 1261.4 | -8.237 | 1.042 | -0.012 | -0.068 |
| 0.9240 | 0.85091 | -0.0208 | 1274.2 | -4.349 | 1.030 | -0.006 | -0.028 |
| 1.0000 | 0.84041 | 0.0000 | 1287.0 | 0.000 | 1.019 | 0.000 | 0.000 |
| 313.15 K | | | | | | | |
| 0.0000 | 0.93792 | 0.0000 | 1122.0 | 0.000 | 1.099 | 0.000 | 0.000 |
| 0.1306 | 0.92818 | -0.0448 | 1142.5 | -11.46 | 1.068 | -0.008 | -0.031 |
| 0.2526 | 0.91823 | -0.0673 | 1159.8 | -17.18 | 1.040 | -0.015 | -0.096 |
| 0.3668 | 0.90813 | -0.0751 | 1175.2 | -19.40 | 1.015 | -0.019 | -0.152 |
| 0.4740 | 0.89794 | -0.0750 | 1189.4 | -19.46 | 0.993 | -0.022 | -0.190 |
| 0.5748 | 0.88772 | -0.0721 | 1202.9 | -18.16 | 0.975 | -0.022 | -0.199 |
| 0.6697 | 0.87745 | -0.0646 | 1216.0 | -15.93 | 0.961 | -0.019 | -0.174 |
| 0.7593 | 0.86714 | -0.0540 | 1228.9 | -12.97 | 0.949 | -0.015 | -0.121 |
| 0.8439 | 0.85679 | -0.0405 | 1241.6 | -9.351 | 0.938 | -0.010 | -0.077 |
| 0.9240 | 0.84641 | -0.0253 | 1253.9 | -5.046 | 0.929 | -0.005 | -0.034 |
| 1.0000 | 0.83591 | 0.0000 | 1266.0 | 0.000 | 0.921 | 0.000 | 0.000 |
| Allyl alcohol (1)+ propanoic acid (2) | | | | | | | |
| 303.15 K | | | | | | | |
| 0.0000 | 0.98326 | 0.0000 | 1127.5 | 0.000 | 0.962 | 0.000 | 0.000 |
| 0.1083 | 0.96988 | -0.0360 | 1149.7 | -9.312 | 0.972 | -0.007 | -0.151 |
| 0.2147 | 0.95631 | -0.0570 | 1170.4 | -15.25 | 0.983 | -0.013 | -0.278 |
| 0.3191 | 0.94260 | -0.0687 | 1189.7 | -18.48 | 0.995 | -0.018 | -0.377 |
| 0.4217 | 0.92878 | -0.0723 | 1208.1 | -19.56 | 1.009 | -0.020 | -0.423 |
| 0.5224 | 0.91490 | -0.0710 | 1225.6 | -18.94 | 1.024 | -0.021 | -0.435 |
| 0.6213 | 0.90095 | -0.0656 | 1242.5 | -16.97 | 1.042 | -0.020 | -0.401 |
| 0.7185 | 0.88695 | -0.0556 | 1259.0 | -13.92 | 1.060 | -0.017 | -0.334 |
| 0.8139 | 0.87290 | -0.0421 | 1275.2 | -9.992 | 1.080 | -0.012 | -0.231 |
| 0.9078 | 0.85878 | -0.0237 | 1291.2 | -5.319 | 1.100 | -0.007 | -0.132 |
| 1.0000 | 0.84460 | 0.0000 | 1307.0 | 0.000 | 1.122 | 0.000 | 0.000 |
| 308.15K | | | | | | | |
| 0.0000 | 0.97782 | 0.0000 | 1108.2 | 0.000 | 0.890 | 0.000 | 0.000 |
| 0.1083 | 0.96461 | -0.0389 | 1130.7 | -10.48 | 0.898 | -0.006 | -0.160 |
| 0.2147 | 0.95117 | -0.0611 | 1151.2 | -16.58 | 0.906 | -0.012 | -0.296 |
| 0.3191 | 0.93759 | -0.0723 | 1170.2 | -19.59 | 0.915 | -0.017 | -0.405 |
| 0.4217 | 0.92389 | -0.0757 | 1188.2 | -20.42 | 0.925 | -0.019 | -0.466 |
| 0.5224 | 0.91013 | -0.0744 | 1205.6 | -19.73 | 0.937 | -0.020 | -0.479 |
| 0.6213 | 0.89632 | -0.0695 | 1222.7 | -17.90 | 0.951 | -0.019 | -0.440 |
| 0.7185 | 0.88245 | -0.0601 | 1239.5 | -15.09 | 0.967 | -0.016 | -0.361 |
| 0.8139 | 0.86851 | -0.0457 | 1255.9 | -11.31 | 0.984 | -0.011 | -0.247 |
| 0.9078 | 0.85451 | -0.0271 | 1271.8 | -6.369 | 1.001 | -0.006 | -0.136 |
| 1.0000 | 0.84041 | 0.0000 | 1287.0 | 0.000 | 1.019 | 0.000 | 0.000 |
| 313.15K | | | | | | | |
| 0.0000 | 0.97245 | 0.0000 | 1089.9 | 0.000 | 0.810 | 0.000 | 0.000 |
| 0.1083 | 0.95937 | -0.0430 | 1112.5 | -11.64 | 0.816 | -0.006 | -0.168 |
| 0.2147 | 0.94605 | -0.0672 | 1132.6 | -17.92 | 0.823 | -0.011 | -0.310 |
| 0.3191 | 0.93253 | -0.0767 | 1151.1 | -20.69 | 0.830 | -0.015 | -0.423 |
| 0.4217 | 0.91891 | -0.0791 | 1168.7 | -21.29 | 0.839 | -0.018 | -0.495 |
| 0.5224 | 0.90524 | -0.0778 | 1185.8 | -20.53 | 0.850 | -0.018 | -0.497 |
| 0.6213 | 0.89152 | -0.0734 | 1202.8 | -18.83 | 0.862 | -0.017 | -0.453 |
| 0.7185 | 0.87774 | -0.0647 | 1219.6 | -16.27 | 0.876 | -0.014 | -0.367 |
| 0.8139 | 0.86389 | -0.0508 | 1236.0 | -12.62 | 0.890 | -0.010 | -0.258 |
| 0.9078 | 0.84998 | -0.0318 | 1251.7 | -7.418 | 0.905 | -0.005 | -0.138 |
| 1.0000 | 0.83591 | 0.0000 | 1266.0 | 0.000 | 0.921 | 0.000 | 0.000 |
| allyl alcohol (1)+ ethanoic acid (2) | | | | | | | |
| 303.15K | | | | | | | |
| 0.0000 | 1.03832 | 0.0000 | 1117.5 | 0.000 | 1.042 | 0.000 | 0.000 |
| 0.0855 | 1.01957 | -0.0360 | 1140.2 | -8.990 | 1.044 | -0.005 | -0.098 |
| 0.1737 | 1.00050 | -0.0550 | 1161.7 | -15.02 | 1.048 | -0.008 | -0.147 |
| 0.2649 | 0.98131 | -0.0684 | 1182.2 | -18.60 | 1.052 | -0.011 | -0.199 |
| 0.3593 | 0.96199 | -0.0741 | 1201.8 | -20.23 | 1.059 | -0.012 | -0.207 |
| 0.4568 | 0.94259 | -0.0754 | 1220.8 | -20.31 | 1.067 | -0.012 | -0.199 |
| 0.5578 | 0.92315 | -0.0733 | 1239.4 | -19.15 | 1.076 | -0.011 | -0.174 |
| 0.6624 | 0.90363 | -0.0661 | 1257.6 | -16.86 | 1.086 | -0.009 | -0.134 |
| 0.7709 | 0.88406 | -0.0539 | 1275.4 | -13.31 | 1.097 | -0.007 | -0.103 |
| 0.8833 | 0.86440 | -0.0335 | 1292.1 | -8.021 | 1.109 | -0.004 | -0.058 |
| 1.0000 | 0.84460 | 0.0000 | 1307.0 | 0.000 | 1.122 | 0.000 | 0.000 |
| 308.15K | | | | | | | |
| 0.0000 | 1.03246 | 0.0000 | 1102.4 | 0.000 | 0.977 | 0.000 | 0.000 |
| 0.0855 | 1.01391 | -0.0372 | 1125.0 | -9.870 | 0.977 | -0.004 | -0.081 |
| 0.1737 | 0.99504 | -0.0583 | 1146.2 | -16.30 | 0.978 | -0.006 | -0.125 |
| 0.2649 | 0.97601 | -0.0714 | 1166.1 | -19.99 | 0.980 | -0.008 | -0.147 |
| 0.3593 | 0.95688 | -0.0784 | 1185.2 | -21.57 | 0.984 | -0.008 | -0.146 |
| 0.4568 | 0.93765 | -0.0796 | 1203.7 | -21.59 | 0.988 | -0.008 | -0.134 |
| 0.5578 | 0.91836 | -0.0771 | 1221.8 | -20.40 | 0.993 | -0.007 | -0.110 |
| 0.6624 | 0.89902 | -0.0707 | 1239.7 | -18.15 | 0.999 | -0.006 | -0.091 |
| 0.7709 | 0.87963 | -0.0595 | 1257.0 | -14.60 | 1.005 | -0.004 | -0.063 |
| 0.8833 | 0.86010 | -0.0374 | 1273.2 | -9.028 | 1.012 | -0.003 | -0.039 |
| 1.0000 | 0.84041 | 0.0000 | 1287.0 | 0.000 | 1.019 | 0.000 | 0.000 |
| 313.15K | | | | | | | |
| 0.0000 | 1.02712 | 0.0000 | 1084.4 | 0.000 | 0.913 | 0.000 | 0.000 |
| 0.0855 | 1.00870 | -0.0408 | 1107.0 | -10.75 | 0.913 | -0.001 | -0.005 |
| 0.1737 | 0.98994 | -0.0637 | 1127.9 | -17.58 | 0.913 | -0.001 | -0.007 |
| 0.2649 | 0.97099 | -0.0768 | 1147.5 | -21.38 | 0.913 | -0.002 | -0.012 |
| 0.3593 | 0.95191 | -0.0823 | 1166.2 | -22.91 | 0.913 | -0.003 | -0.029 |
| 0.4568 | 0.93275 | -0.0827 | 1184.3 | -22.86 | 0.913 | -0.003 | -0.034 |
| 0.5578 | 0.91355 | -0.0799 | 1202.2 | -21.66 | 0.914 | -0.004 | -0.044 |
| 0.6624 | 0.89431 | -0.0744 | 1219.9 | -19.45 | 0.915 | -0.004 | -0.051 |
| 0.7709 | 0.87499 | -0.0628 | 1237.1 | -15.90 | 0.916 | -0.003 | -0.051 |
| 0.8833 | 0.85557 | -0.0423 | 1252.9 | -10.035 | 0.918 | -0.002 | -0.034 |
| 1.0000 | 0.83591 | 0.0000 | 1266.0 | 0.000 | 0.921 | 0.000 | 0.000 |

**Table 6S:** Density (), speed of sound (*u*), viscosity (η) as a function of mole fraction, *x*1 of allyl alcohol of binary liquid mixtures at *T*= (303.15 to 313.15) K and 0.1MPa pressure and correlation with the Jouyban–Acree model values

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Expt. values | Jouyban–Acree model values | Expt. values | Jouyban–Acree model values | Expt. values | Jouyban–Acree model values |
| *x1* | density (*ρ* /g·cm-3) | | Speed of sound *(u)* m.s-1 | | viscosity (*η* / mPa·s) | |
| allyl alcohol + butanoic acid | | | | | | |
| 303.15 K | | | | | | |
| 0.0000 | 0.94792 | 0.94792 | 1159.0 | 1159.0 | 1.385 | 1.385 |
| 0.1306 | 0.93797 | 0.93798 | 1179.4 | 1179.4 | 1.341 | 1.341 |
| 0.2526 | 0.92787 | 0.92787 | 1197.6 | 1197.6 | 1.302 | 1.302 |
| 0.3668 | 0.91766 | 0.91765 | 1213.9 | 1214.0 | 1.268 | 1.268 |
| 0.4740 | 0.90736 | 0.90736 | 1228.8 | 1228.8 | 1.237 | 1.238 |
| 0.5748 | 0.89700 | 0.89700 | 1242.5 | 1242.5 | 1.211 | 1.211 |
| 0.6697 | 0.88659 | 0.88659 | 1255.5 | 1255.5 | 1.188 | 1.188 |
| 0.7593 | 0.87614 | 0.87614 | 1268.2 | 1268.2 | 1.168 | 1.168 |
| 0.8439 | 0.86565 | 0.86565 | 1280.8 | 1280.8 | 1.150 | 1.150 |
| 0.9240 | 0.85513 | 0.85513 | 1293.6 | 1293.6 | 1.135 | 1.135 |
| 1.0000 | 0.84460 | 0.84460 | 1307.0 | 1307.0 | 1.122 | 1.122 |
| 308.15K | | | | | | |
| 0.0000 | 0.94293 | 0.94293 | 1140.1 | 1140.1 | 1.242 | 1.242 |
| 0.1306 | 0.93310 | 0.93311 | 1160.6 | 1160.6 | 1.204 | 1.204 |
| 0.2526 | 0.92309 | 0.92308 | 1178.4 | 1178.4 | 1.170 | 1.170 |
| 0.3668 | 0.91295 | 0.91294 | 1194.5 | 1194.4 | 1.140 | 1.140 |
| 0.4740 | 0.90272 | 0.90272 | 1209.0 | 1209.0 | 1.114 | 1.114 |
| 0.5748 | 0.89245 | 0.89245 | 1222.7 | 1222.7 | 1.092 | 1.092 |
| 0.6697 | 0.88212 | 0.88212 | 1235.9 | 1235.9 | 1.073 | 1.073 |
| 0.7593 | 0.87176 | 0.87176 | 1248.7 | 1248.7 | 1.056 | 1.056 |
| 0.8439 | 0.86135 | 0.86135 | 1261.4 | 1261.4 | 1.042 | 1.042 |
| 0.9240 | 0.85091 | 0.85090 | 1274.2 | 1274.1 | 1.030 | 1.030 |
| 1.0000 | 0.84041 | 0.84041 | 1287.0 | 1287.0 | 1.019 | 1.019 |
| 313.15 K | | | | | | |
| 0.0000 | 0.93792 | 0.93792 | 1122.0 | 1122.0 | 1.099 | 1.099 |
| 0.1306 | 0.92818 | 0.92819 | 1142.5 | 1142.5 | 1.068 | 1.068 |
| 0.2526 | 0.91823 | 0.91821 | 1159.8 | 1159.8 | 1.040 | 1.040 |
| 0.3668 | 0.90813 | 0.90811 | 1175.2 | 1175.1 | 1.015 | 1.014 |
| 0.4740 | 0.89794 | 0.89794 | 1189.4 | 1189.4 | 0.993 | 0.993 |
| 0.5748 | 0.88772 | 0.88772 | 1202.9 | 1202.9 | 0.975 | 0.975 |
| 0.6697 | 0.87745 | 0.87745 | 1216.0 | 1216.1 | 0.961 | 0.961 |
| 0.7593 | 0.86714 | 0.86715 | 1228.9 | 1228.9 | 0.949 | 0.949 |
| 0.8439 | 0.85679 | 0.85679 | 1241.6 | 1241.6 | 0.938 | 0.938 |
| 0.9240 | 0.84641 | 0.84638 | 1253.9 | 1253.9 | 0.929 | 0.929 |
| 1.0000 | 0.83591 | 0.83591 | 1266.0 | 1266.0 | 0.921 | 0.921 |
| allyl alcohol + propanoic acid | | | | | | |
| 303.15 K | | | | | | |
| 0.0000 | 0.98326 | 0.98326 | 1127.5 | 1127.5 | 0.962 | 0.962 |
| 0.1083 | 0.96988 | 0.96988 | 1149.7 | 1149.7 | 0.972 | 0.972 |
| 0.2147 | 0.95631 | 0.95631 | 1170.4 | 1170.4 | 0.983 | 0.983 |
| 0.3191 | 0.94260 | 0.94260 | 1189.7 | 1189.7 | 0.995 | 0.995 |
| 0.4217 | 0.92878 | 0.92878 | 1208.1 | 1208.1 | 1.009 | 1.009 |
| 0.5224 | 0.91490 | 0.91490 | 1225.6 | 1225.6 | 1.024 | 1.024 |
| 0.6213 | 0.90095 | 0.90095 | 1242.5 | 1242.5 | 1.042 | 1.042 |
| 0.7185 | 0.88695 | 0.88695 | 1259.0 | 1259.0 | 1.060 | 1.060 |
| 0.8139 | 0.87290 | 0.87290 | 1275.2 | 1275.2 | 1.080 | 1.080 |
| 0.9078 | 0.85878 | 0.85878 | 1291.2 | 1291.1 | 1.100 | 1.101 |
| 1.0000 | 0.84460 | 0.84460 | 1307.0 | 1307.0 | 1.122 | 1.122 |
| 308.15 K | | | | | | |
| 0.0000 | 0.97782 | 0.97782 | 1108.2 | 1108.2 | 0.890 | 0.890 |
| 0.1083 | 0.96461 | 0.96461 | 1130.7 | 1130.8 | 0.898 | 0.898 |
| 0.2147 | 0.95117 | 0.95117 | 1151.2 | 1151.2 | 0.906 | 0.906 |
| 0.3191 | 0.93759 | 0.93758 | 1170.2 | 1170.2 | 0.915 | 0.915 |
| 0.4217 | 0.92389 | 0.92390 | 1188.2 | 1188.2 | 0.925 | 0.925 |
| 0.5224 | 0.91013 | 0.91014 | 1205.6 | 1205.6 | 0.937 | 0.937 |
| 0.6213 | 0.89632 | 0.89632 | 1222.7 | 1222.7 | 0.951 | 0.951 |
| 0.7185 | 0.88245 | 0.88245 | 1239.5 | 1239.5 | 0.967 | 0.967 |
| 0.8139 | 0.86851 | 0.86851 | 1255.9 | 1255.9 | 0.984 | 0.984 |
| 0.9078 | 0.85451 | 0.85451 | 1271.8 | 1271.8 | 1.001 | 1.001 |
| 1.0000 | 0.84041 | 0.84041 | 1287.0 | 1287.0 | 1.019 | 1.019 |
| 313.15 K | | | | | | |
| 0.0000 | 0.97245 | 0.97245 | 1089.9 | 1089.9 | 0.810 | 0.810 |
| 0.1083 | 0.95937 | 0.95938 | 1112.5 | 1112.6 | 0.816 | 0.816 |
| 0.2147 | 0.94605 | 0.94604 | 1132.6 | 1132.6 | 0.823 | 0.823 |
| 0.3191 | 0.93253 | 0.93253 | 1151.1 | 1151.1 | 0.830 | 0.830 |
| 0.4217 | 0.91891 | 0.91891 | 1168.7 | 1168.7 | 0.839 | 0.839 |
| 0.5224 | 0.90524 | 0.90524 | 1185.8 | 1185.8 | 0.850 | 0.850 |
| 0.6213 | 0.89152 | 0.89151 | 1202.8 | 1202.8 | 0.862 | 0.862 |
| 0.7185 | 0.87774 | 0.87774 | 1219.6 | 1219.6 | 0.876 | 0.876 |
| 0.8139 | 0.86389 | 0.86390 | 1236.0 | 1236.0 | 0.890 | 0.890 |
| 0.9078 | 0.84998 | 0.84997 | 1251.7 | 1251.6 | 0.905 | 0.906 |
| 1.0000 | 0.83591 | 0.83591 | 1266.0 | 1266.0 | 0.921 | 0.921 |
| allyl alcohol + ethanoic acid | | | | | | |
| 303.15 K | | | | | | |
| 0.0000 | 1.03832 | 1.03832 | 1117.5 | 1117.5 | 1.042 | 1.042 |
| 0.0855 | 1.01957 | 1.01956 | 1140.2 | 1140.4 | 1.044 | 1.044 |
| 0.1737 | 1.00050 | 1.00051 | 1161.7 | 1161.7 | 1.048 | 1.047 |
| 0.2649 | 0.98131 | 0.98130 | 1182.2 | 1182.0 | 1.052 | 1.052 |
| 0.3593 | 0.96199 | 0.96198 | 1201.8 | 1201.6 | 1.059 | 1.059 |
| 0.4568 | 0.94259 | 0.94259 | 1220.8 | 1220.8 | 1.067 | 1.067 |
| 0.5578 | 0.92315 | 0.92314 | 1239.4 | 1239.5 | 1.076 | 1.076 |
| 0.6624 | 0.90363 | 0.90364 | 1257.6 | 1257.8 | 1.086 | 1.086 |
| 0.7709 | 0.88406 | 0.88406 | 1275.4 | 1275.3 | 1.097 | 1.097 |
| 0.8833 | 0.86440 | 0.86439 | 1292.1 | 1291.9 | 1.109 | 1.109 |
| 1.0000 | 0.84460 | 0.84460 | 1307.0 | 1307.0 | 1.122 | 1.122 |
| 308.15 K | | | | | | |
| 0.0000 | 1.03246 | 1.03246 | 1102.4 | 1102.4 | 0.977 | 0.977 |
| 0.0855 | 1.01391 | 1.01390 | 1125.0 | 1125.3 | 0.977 | 0.977 |
| 0.1737 | 0.99504 | 0.99505 | 1146.2 | 1146.2 | 0.978 | 0.978 |
| 0.2649 | 0.97601 | 0.97601 | 1166.1 | 1165.9 | 0.980 | 0.981 |
| 0.3593 | 0.95688 | 0.95686 | 1185.2 | 1185.0 | 0.984 | 0.984 |
| 0.4568 | 0.93765 | 0.93764 | 1203.7 | 1203.7 | 0.988 | 0.988 |
| 0.5578 | 0.91836 | 0.91837 | 1221.8 | 1222.0 | 0.993 | 0.993 |
| 0.6624 | 0.89902 | 0.89904 | 1239.7 | 1239.8 | 0.999 | 0.999 |
| 0.7709 | 0.87963 | 0.87962 | 1257.0 | 1256.9 | 1.005 | 1.005 |
| 0.8833 | 0.86010 | 0.86009 | 1273.2 | 1272.8 | 1.012 | 1.012 |
| 1.0000 | 0.84041 | 0.84041 | 1287.0 | 1287.0 | 1.019 | 1.019 |
| 313.15 K | | | | | | |
| 0.0000 | 1.02712 | 1.02712 | 1084.4 | 1084.4 | 0.913 | 0.913 |
| 0.0855 | 1.00870 | 1.00871 | 1107.0 | 1107.2 | 0.913 | 0.913 |
| 0.1737 | 0.98994 | 0.98994 | 1127.9 | 1127.9 | 0.913 | 0.913 |
| 0.2649 | 0.97099 | 0.97097 | 1147.5 | 1147.3 | 0.913 | 0.913 |
| 0.3593 | 0.95191 | 0.95189 | 1166.2 | 1166.0 | 0.913 | 0.913 |
| 0.4568 | 0.93275 | 0.93275 | 1184.3 | 1184.3 | 0.913 | 0.913 |
| 0.5578 | 0.91355 | 0.91356 | 1202.2 | 1202.4 | 0.914 | 0.914 |
| 0.6624 | 0.89431 | 0.89432 | 1219.9 | 1220.1 | 0.915 | 0.915 |
| 0.7709 | 0.87499 | 0.87499 | 1237.1 | 1237.0 | 0.916 | 0.916 |
| 0.8833 | 0.85557 | 0.85554 | 1252.9 | 1252.5 | 0.918 | 0.918 |
| 1.0000 | 0.83591 | 0.83591 | 1266.0 | 1266.0 | 0.921 | 0.921 |