Supporting Information

Densities and Viscosities for the Ternary System of Cyclopropanemethanol (1) + 2, 2, 4-Trimethylpentane (2) + Decalin (3) and Corresponding Binaries at *T* = (293.15 to 323.15) K

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**Table S1**: The Excess Molar Volumes () at Different Mole Fractions (*x*1) for the Binary Systems of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2); Cyclopropanemethanol (1) + Decalin (2); 2,2,4-Trimethylpentane (1) + Decalin (2) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa*a*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | / cm3·mol-1 | | | | | | | | |
| *x*1 | | | 293.15 K | 298.15 K | 303.15 K | 308.15 K | 313.15 K | 318.15 K | 323.15 K | | |
|  | | | Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) | | | | | | | | |
| 0.0991 | | | 0.074 | 0.086 | 0.101 | 0.120 | 0.140 | 0.163 | 0.189 | | |
| 0.1991 | | | 0.042 | 0.054 | 0.068 | 0.086 | 0.105 | 0.129 | 0.155 | | |
| 0.3007 | | | -0.006 | 0.003 | 0.015 | 0.030 | 0.046 | 0.067 | 0.090 | | |
| 0.4013 | | | -0.072 | -0.066 | -0.058 | -0.048 | -0.036 | -0.021 | -0.004 | | |
| 0.5000 | | | -0.145 | -0.144 | -0.142 | -0.136 | -0.130 | -0.120 | -0.109 | | |
| 0.6004 | | | -0.160 | -0.162 | -0.163 | -0.162 | -0.160 | -0.155 | -0.148 | | |
| 0.7007 | | | -0.198 | -0.204 | -0.208 | -0.211 | -0.213 | -0.213 | -0.212 | | |
| 0.8004 | | | -0.181 | -0.188 | -0.194 | -0.199 | -0.203 | -0.206 | -0.208 | | |
| 0.9002 | | | -0.138 | -0.143 | -0.148 | -0.153 | -0.157 | -0.160 | -0.163 | | |
|  | | Cyclopropanemethanol (1) + Decalin (2) | | | | | | | | |
| 0.0988 | | | 0.185 | 0.201 | 0.218 | 0.237 | 0.258 | 0.281 | 0.306 | | |
| 0.2017 | | | 0.264 | 0.285 | 0.307 | 0.332 | 0.359 | 0.389 | 0.422 | | |
| 0.2994 | | | 0.310 | 0.332 | 0.357 | 0.384 | 0.414 | 0.447 | 0.484 | | |
| 0.4008 | | | 0.349 | 0.372 | 0.397 | 0.425 | 0.455 | 0.488 | 0.525 | | |
| 0.5004 | | | 0.343 | 0.365 | 0.389 | 0.415 | 0.444 | 0.477 | 0.512 | | |
| 0.6011 | | | 0.323 | 0.342 | 0.364 | 0.388 | 0.413 | 0.443 | 0.474 | | |
| 0.7007 | | | 0.291 | 0.308 | 0.326 | 0.346 | 0.367 | 0.391 | 0.417 | | |
| 0.8009 | | | 0.234 | 0.247 | 0.259 | 0.273 | 0.288 | 0.305 | 0.323 | | |
| 0.8994 | | | 0.138 | 0.153 | 0.159 | 0.166 | 0.174 | 0.183 | 0.193 | | |
|  | 2,2,4-Trimethylpentane (1) + Decalin (2) | | | | | | | | |
| 0.1031 | | | -0.290 | -0.300 | -0.310 | -0.322 | -0.334 | -0.347 | -0.359 | | |
| 0.1995 | | | -0.549 | -0.568 | -0.588 | -0.609 | -0.631 | -0.654 | -0.679 | | |
| 0.2990 | | | -0.715 | -0.740 | -0.767 | -0.795 | -0.826 | -0.857 | -0.891 | | |
| 0.4001 | | | -0.856 | -0.886 | -0.918 | -0.951 | -0.987 | -1.025 | -1.065 | | |
| 0.5004 | | | -0.881 | -0.912 | -0.945 | -0.981 | -1.020 | -1.061 | -1.104 | | |
| 0.6002 | | | -0.906 | -0.936 | -0.970 | -1.007 | -1.046 | -1.088 | -1.131 | | |
| 0.6994 | | | -0.776 | -0.804 | -0.836 | -0.869 | -0.904 | -0.940 | -0.980 | | |
| 0.8002 | | | -0.625 | -0.649 | -0.674 | -0.701 | -0.729 | -0.758 | -0.790 | | |
| 0.8990 | | | -0.366 | -0.377 | -0.391 | -0.406 | -0.423 | -0.441 | -0.460 | | |

*a*Standard uncertainties *u* are *u*(*x*) = 0.0002, and *u*(*T*) = 0.01 K, *u*(*P*) = 0.20 KPa. The combined standard uncertainty is *u*c() = 0.016 cm3· mol-1

**Table S2**: The Viscosity Deviations (Δ*η*) at Different Mole Fractions (*x*1) for the Binary Systems of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2); Cyclopropanemethanol (1) + Decalin (2); 2,2,4-Trimethylpentane (1) + Decalin (2) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa*a*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Δη / mPa·s | | | | | | | | | | |
| *x*1 | 293.15 K | 298.15 K | 303.15 K | 308.15 K | 313.15 K | 318.15 K | 323.15 K | 328.15 K | 333.15 K | 338.15 K | 343.15 K |
|  | Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) | | | | | | | | | | |
| 0.0991 | -0.313 | -0.265 | -0.228 | -0.196 | -0.169 | -0.147 | -0.128 | -0.111 | -0.097 | -0.085 | -0.072 |
| 0.1991 | -0.604 | -0.512 | -0.437 | -0.375 | -0.323 | -0.279 | -0.242 | -0.211 | -0.184 | -0.161 | -0.140 |
| 0.3007 | -0.874 | -0.739 | -0.631 | -0.541 | -0.465 | -0.401 | -0.348 | -0.302 | -0.264 | -0.230 | -0.200 |
| 0.4013 | -1.100 | -0.929 | -0.791 | -0.677 | -0.582 | -0.501 | -0.434 | -0.377 | -0.328 | -0.286 | -0.249 |
| 0.5000 | -1.275 | -1.076 | -0.915 | -0.782 | -0.672 | -0.579 | -0.501 | -0.435 | -0.379 | -0.331 | -0.289 |
| 0.6004 | -1.380 | -1.162 | -0.986 | -0.841 | -0.721 | -0.621 | -0.536 | -0.465 | -0.404 | -0.353 | -0.308 |
| 0.7007 | -1.382 | -1.160 | -0.982 | -0.834 | -0.714 | -0.958 | -0.529 | -0.458 | -0.397 | -0.346 | -0.302 |
| 0.8004 | -1.222 | -1.023 | -0.861 | -0.730 | -0.623 | -0.532 | -0.458 | -0.396 | -0.342 | -0.298 | -0.260 |
| 0.9002 | -0.835 | -0.692 | -0.580 | -0.489 | -0.415 | -0.353 | -0.301 | -0.260 | -0.224 | -0.194 | -0.169 |
|  | Cyclopropanemethanol (1) + Decalin (2) | | | | | | | | | | |
| 0.0988 | -0.228 | -0.195 | -0.170 | -0.150 | -0.134 | -0.119 | -0.108 | -0.098 | -0.089 | -0.082 | -0.076 |
| 0.2017 | -0.354 | -0.300 | -0.257 | -0.223 | -0.194 | -0.170 | -0.169 | -0.135 | -0.121 | -0.109 | -0.100 |
| 0.2994 | -0.441 | -0.372 | -0.317 | -0.272 | -0.236 | -0.205 | -0.180 | -0.158 | -0.141 | -0.126 | -0.114 |
| 0.4008 | -0.513 | -0.432 | -0.367 | -0.315 | -0.270 | -0.234 | -0.204 | -0.179 | -0.158 | -0.141 | -0.126 |
| 0.5004 | -0.544 | -0.457 | -0.388 | -0.332 | -0.285 | -0.247 | -0.215 | -0.188 | -0.166 | -0.147 | -0.131 |
| 0.6011 | -0.528 | -0.442 | -0.373 | -0.318 | -0.272 | -0.234 | -0.203 | -0.177 | -0.155 | -0.137 | -0.122 |
| 0.7007 | -0.503 | -0.419 | -0.354 | -0.300 | -0.257 | -0.221 | -0.191 | -0.167 | -0.146 | -0.129 | -0.114 |
| 0.8009 | -0.437 | -0.364 | -0.306 | -0.260 | -0.222 | -0.190 | -0.165 | -0.143 | -0.125 | -0.110 | -0.098 |
| 0.8994 | -0.250 | -0.204 | -0.169 | -0.141 | -0.118 | -0.100 | -0.085 | -0.073 | -0.063 | -0.054 | -0.048 |
|  | 2,2,4-Trimethylpentane (1) + Decalin (2) | | | | | | | | | | |
| 0.1031 | -0.233 | -0.201 | -0.175 | -0.154 | -0.135 | -0.120 | -0.107 | -0.095 | -0.086 | -0.078 | -0.070 |
| 0.1995 | -0.363 | -0.314 | -0.275 | -0.243 | -0.214 | -0.191 | -0.170 | -0.153 | -0.138 | -0.125 | -0.113 |
| 0.2990 | -0.435 | -0.378 | -0.332 | -0.293 | -0.260 | -0.232 | -0.207 | -0.186 | -0.168 | -0.152 | -0.138 |
| 0.4001 | -0.469 | -0.410 | -0.361 | -0.320 | -0.279 | -0.255 | -0.229 | -0.207 | -0.187 | -0.170 | -0.154 |
| 0.5004 | -0.451 | -0.394 | -0.348 | -0.309 | -0.276 | -0.247 | -0.222 | -0.201 | -0.182 | -0.165 | -0.149 |
| 0.6002 | -0.406 | -0.356 | -0.315 | -0.281 | -0.251 | -0.225 | -0.203 | -0.183 | -0.166 | -0.151 | -0.136 |
| 0.6994 | -0.331 | -0.290 | -0.258 | -0.229 | -0.205 | -0.184 | -0.166 | -0.150 | -0.136 | -0.124 | -0.111 |
| 0.8002 | -0.236 | -0.205 | -0.185 | -0.165 | -0.149 | -0.134 | -0.120 | -0.109 | -0.098 | -0.089 | -0.079 |
| 0.8990 | -0.129 | -0.113 | -0.101 | -0.090 | -0.080 | -0.073 | -0.066 | -0.059 | -0.054 | -0.048 | -0.042 |

*a*Standard uncertainties *u* are *u*(*x*) = 0.0002, and *u*(*T*) = 0.01 K, *u*(*P*) = 0.20 KPa. The combined standard uncertainty is *u*c(Δ*η*) = 0.01 mPa·s.

**Table S3**: The Excess Molar Volumes () for Ternary Mixtures of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) + Decalin (3) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa*a*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | / cm3·mol-1 | | | | | | | |
| *x*1 | *x*2 | | 293.15 K | 298.15 K | 303.15 K | 308.15 K | 313.15 K | 318.15 K | 323.15 K |
| 0.1010 | 0.1007 | | -0.092 | -0.085 | -0.078 | -0.069 | -0.060 | -0.047 | -0.034 |
| 0.1043 | 0.2006 | | -0.311 | -0.313 | -0.313 | -0.312 | -0.311 | -0.309 | -0.305 |
| 0.1056 | 0.3044 | | -0.480 | -0.487 | -0.493 | -0.500 | -0.505 | -0.509 | -0.513 |
| 0.1011 | 0.3990 | | -0.581 | -0.592 | -0.602 | -0.612 | -0.622 | -0.631 | -0.639 |
| 0.1087 | 0.4962 | | -0.600 | -0.611 | -0.622 | -0.632 | -0.643 | -0.652 | -0.661 |
| 0.0994 | 0.6016 | | -0.555 | -0.566 | -0.577 | -0.587 | -0.596 | -0.605 | -0.613 |
| 0.1061 | 0.6955 | | -0.424 | -0.430 | -0.436 | -0.440 | -0.444 | -0.447 | -0.448 |
| 0.1012 | 0.7982 | | -0.234 | -0.233 | -0.231 | -0.227 | -0.222 | -0.216 | -0.207 |
| 0.2049 | 0.0995 | | -0.003 | 0.008 | 0.021 | 0.036 | 0.053 | 0.072 | 0.093 |
| 0.2036 | 0.2008 | | -0.231 | -0.227 | -0.222 | -0.216 | -1.947 | -0.199 | -0.187 |
| 0.2013 | 0.3001 | | -0.368 | -0.370 | -0.370 | -0.370 | -0.369 | -0.366 | -0.362 |
| 0.2030 | 0.3963 | | -0.452 | -0.457 | -0.461 | -0.463 | -0.465 | -0.465 | -0.464 |
| 0.2039 | 0.4965 | | -0.459 | -0.465 | -0.469 | -0.472 | -0.474 | -0.475 | -0.473 |
| 0.2049 | 0.5956 | | -0.384 | -0.388 | -0.391 | -0.391 | -0.390 | -0.388 | -0.383 |
| 0.2020 | 0.6964 | | -0.229 | -0.227 | -0.224 | -0.218 | -0.210 | -0.200 | -0.188 |
| 0.2998 | 0.1000 | | 0.046 | 0.055 | 0.070 | 0.087 | 0.106 | 0.128 | 0.154 |
| 0.3014 | 0.2003 | | -0.166 | -0.159 | -0.152 | -0.142 | -0.131 | -0.118 | -0.102 |
| 0.3022 | 0.2997 | | -0.315 | -0.314 | -0.312 | -0.308 | -0.303 | -0.296 | -0.284 |
| 0.2996 | 0.4002 | | -0.381 | -0.382 | -0.383 | -0.382 | -0.380 | -0.375 | -0.369 |
| 0.3035 | 0.4964 | | -0.339 | -0.340 | -0.340 | -0.339 | -0.336 | -0.331 | -0.323 |
| 0.3027 | 0.5977 | | -0.244 | -0.243 | -0.240 | -0.234 | -0.227 | -0.217 | -0.205 |
| 0.4005 | 0.0984 | | 0.080 | 0.095 | 0.106 | 0.124 | 0.144 | 0.167 | 0.193 |
| 0.3971 | 0.2007 | | -0.158 | -0.152 | -0.144 | -0.134 | -0.122 | -1.682 | -0.092 |
| 0.4029 | 0.2986 | | -0.247 | -0.245 | -0.241 | -0.236 | -0.229 | -0.220 | -0.209 |
| 0.3998 | 0.3981 | | -0.312 | -0.312 | -0.311 | -0.308 | -0.304 | -0.297 | -0.289 |
| 0.4002 | 0.4986 | | -0.239 | -0.238 | -0.236 | -0.232 | -0.226 | -0.217 | -0.206 |
| 0.4985 | 0.0993 | | 0.082 | 0.095 | 0.109 | 0.126 | 0.145 | 0.167 | 0.191 |
| 0.5021 | 0.1988 | | -0.139 | -0.134 | -0.127 | -0.118 | -0.107 | -0.094 | -0.079 |
| 0.5004 | 0.3001 | | -0.208 | -0.207 | -0.204 | -0.199 | -0.193 | -0.185 | -0.175 |
| 0.4981 | 0.4023 | | -0.321 | -0.324 | -0.322 | -0.320 | -0.316 | -0.310 | -0.302 |
| 0.5996 | 0.0999 | | 0.065 | 0.075 | 0.087 | 0.101 | 0.117 | 0.136 | 0.156 |
| 0.6009 | 0.1999 | | -0.122 | -0.120 | -0.115 | -0.109 | -0.101 | -0.092 | -0.080 |
| 0.5995 | 0.3001 | | -0.214 | -0.215 | -0.215 | -0.214 | -0.210 | -0.205 | -0.198 |
| 0.7005 | 0.1008 | | 0.034 | 0.040 | 0.045 | 0.054 | 0.065 | 0.078 | 0.092 |
| 0.7008 | 0.1988 | | -0.109 | -0.110 | -0.109 | -0.107 | -0.104 | -0.099 | -0.093 |
| 0.8009 | 0.0982 | | -0.031 | -0.029 | -0.027 | -0.023 | -0.019 | -0.013 | -0.006 |

*a*Standard uncertainties *u* are *u*(*x*) = 0.0002, and *u*(*T*) = 0.01 K, *u*(*P*) = 0.20 KPa. The combined standard uncertainty is *u*c() = 0.016 cm3· mol-1

**Table S4**: The Viscosity Deviations (Δ*η*) for Ternary Mixtures of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) + Decalin (3) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa*a*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Δ*η /* mPa·s | | | | | | | |
| *x*1 | *x*2 | 293.15 K | 298.15 K | 303.15 K | 308.15 K | 313.15 K | 318.15 K | 323.15 K |
| 0.1010 | 0.1007 | -0.453 | -0.389 | -0.338 | -0.295 | -0.260 | -0.231 | -0.206 |
| 0.1043 | 0.2006 | -0.604 | -0.520 | -0.452 | -0.397 | -0.350 | -0.310 | -0.277 |
| 0.1056 | 0.3044 | -0.670 | -0.578 | -0.503 | -0.441 | -0.388 | -0.344 | -0.306 |
| 0.1011 | 0.3990 | -0.682 | -0.589 | -0.514 | -0.451 | -0.398 | -0.353 | -0.315 |
| 0.1087 | 0.4962 | -0.680 | -0.587 | -0.512 | -0.449 | -0.395 | -0.350 | -0.312 |
| 0.0994 | 0.6016 | -0.607 | -0.524 | -0.457 | -0.401 | -0.353 | -0.313 | -0.278 |
| 0.1061 | 0.6955 | -0.547 | -0.471 | -0.410 | -0.358 | -0.314 | -0.277 | -0.246 |
| 0.1012 | 0.7982 | -0.438 | -0.376 | -0.326 | -0.284 | -0.248 | -0.218 | -0.192 |
| 0.2049 | 0.0995 | -0.604 | -0.514 | -0.452 | -0.403 | -0.333 | -0.291 | -0.257 |
| 0.2036 | 0.2008 | -0.756 | -0.646 | -0.557 | -0.483 | -0.423 | -0.369 | -0.326 |
| 0.2013 | 0.3001 | -0.831 | -0.711 | -0.614 | -0.533 | -0.465 | -0.409 | -0.361 |
| 0.2030 | 0.3963 | -0.862 | -0.738 | -0.637 | -0.554 | -0.484 | -0.425 | -0.375 |
| 0.2039 | 0.4965 | -0.845 | -0.723 | -0.624 | -0.542 | -0.473 | -0.414 | -0.365 |
| 0.2049 | 0.5956 | -0.799 | -0.683 | -0.589 | -0.510 | -0.444 | -0.388 | -0.342 |
| 0.2020 | 0.6964 | -0.711 | -0.606 | -0.521 | -0.449 | -0.390 | -0.340 | -0.297 |
| 0.2998 | 0.1000 | -0.721 | -0.611 | -0.523 | -0.450 | -0.389 | -0.339 | -0.297 |
| 0.3014 | 0.2003 | -0.888 | -0.754 | -0.646 | -0.563 | -0.482 | -0.420 | -0.368 |
| 0.3022 | 0.2997 | -0.991 | -0.844 | -0.724 | -0.625 | -0.543 | -0.474 | -0.416 |
| 0.2996 | 0.4002 | -1.006 | -0.856 | -0.734 | -0.634 | -0.550 | -0.479 | -0.420 |
| 0.3035 | 0.4964 | -1.004 | -0.854 | -0.733 | -0.631 | -0.547 | -0.476 | -0.416 |
| 0.3027 | 0.5977 | -0.950 | -0.806 | -0.690 | -0.594 | -0.513 | -0.445 | -0.388 |
| 0.4005 | 0.0984 | -0.807 | -0.682 | -0.580 | -0.497 | -0.429 | -0.371 | -0.323 |
| 0.3971 | 0.2007 | -1.013 | -0.859 | -0.734 | -0.630 | -0.545 | -0.475 | -0.413 |
| 0.4029 | 0.2986 | -1.108 | -0.939 | -0.802 | -0.689 | -0.594 | -0.516 | -0.450 |
| 0.3998 | 0.3981 | -1.144 | -0.970 | -0.829 | -0.712 | -0.614 | -0.533 | -0.464 |
| 0.4002 | 0.4986 | -1.141 | -0.966 | -0.825 | -0.707 | -0.610 | -0.528 | -0.459 |
| 0.4985 | 0.0993 | -0.889 | -0.750 | -0.614 | -0.567 | -0.470 | -0.406 | -0.353 |
| 0.5021 | 0.1988 | -1.095 | -0.923 | -0.785 | -0.672 | -0.578 | -0.500 | -0.435 |
| 0.5004 | 0.3001 | -1.225 | -1.035 | -0.882 | -0.755 | -0.650 | -0.562 | -0.489 |
| 0.4981 | 0.4023 | -1.273 | -1.076 | -0.916 | -0.784 | -0.674 | -0.582 | -0.505 |
| 0.5996 | 0.0999 | -0.933 | -0.783 | -0.665 | -0.567 | -0.486 | -0.419 | -0.363 |
| 0.6009 | 0.1999 | -1.175 | -0.989 | -0.840 | -0.717 | -0.615 | -0.530 | -0.459 |
| 0.5995 | 0.3001 | -1.307 | -1.100 | -0.934 | -0.797 | -0.684 | -0.589 | -0.510 |
| 0.7005 | 0.1008 | -0.943 | -0.787 | -0.665 | -0.564 | -0.482 | -0.414 | -0.358 |
| 0.7008 | 0.1988 | -1.211 | -1.016 | -0.859 | -0.730 | -0.624 | -0.536 | -0.463 |
| 0.8009 | 0.0982 | -0.923 | -0.770 | -0.649 | -0.549 | -0.468 | -0.401 | -0.345 |

*a*Standard uncertainties *u* are *u*(*x*) = 0.0002, and *u*(*T*) = 0.01 K, *u*(*P*) = 0.20 KPa. The combined standard uncertainty is *u*c(Δ*η*) = 0.01mPa·s.

**Table S5.** Correlation Coefficients (*Ai*) and Standard Deviations (*σ*) of and Δ*η* with the Redlich-Kister (Eq.4) for the Binary Systems of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2); Cyclopropanemethanol (1) + Decalin (2); 2,2,4-Trimethylpentane (1) + Decalin (2) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Function | / cm3·mol-1 | | | | |  | Δ*η /* mPa·s | | | | | |
| *T*/K | *A*0 | *A*1 | *A*2 | *A*3 | *σ* |  | *A*0 | *A*1 | *A*2 | *A*3 | *σ* |
| Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) | | | | | | | | | | | | |
| 293.15 | -0.5278 | -0.9550 | 0.2732 | -0.7473 | 0.0005 |  | -5.0768 | -2.8401 | -1.9144 | -1.1461 | 0.0004 |
| 298.15 | -0.5229 | -1.0324 | 0.3140 | -0.8135 | 0.0005 |  | -4.2862 | -2.3708 | -1.5315 | -0.8738 | 0.0002 |
| 303.15 | -0.5116 | -1.1115 | 0.3678 | -0.8965 | 0.0006 |  | -3.6464 | -1.9850 | -1.2456 | -0.6746 | 0.0001 |
| 308.15 | -0.4928 | -1.1943 | 0.4405 | -1.0119 | 0.0006 |  | -3.1171 | -1.6717 | -1.0157 | -0.5269 | 0.0001 |
| 313.15 | -0.4677 | -1.2885 | 0.5199 | -1.1164 | 0.0007 |  | -2.6765 | -1.4211 | -0.8438 | -0.4133 | 0.0001 |
| 318.15 | -0.4320 | -1.3812 | 0.6153 | -1.2579 | 0.0008 |  | -2.3065 | -1.2161 | -0.6970 | -0.3065 | 0.0000 |
| 323.15 | -0.3877 | -1.4863 | 0.7246 | -1.4002 | 0.0009 |  | -1.9968 | -1.0467 | -0.5785 | -0.2267 | 0.0000 |
| Cyclopropanemethanol (1) + Decalin (2) | | | | | | | | | | | | |
| 293.15 | 1.3630 | -0.0913 | 0.5832 | -0.3061 | 0.0004 |  | -2.1438 | -0.4068 | -0.8186 | 0.2417 | 0.0009 |
| 298.15 | 1.4448 | -0.1337 | 0.6855 | -0.2588 | 0.0005 |  | -1.8013 | -0.3224 | -0.6742 | 0.2650 | 0.0007 |
| 303.15 | 1.5402 | -0.1640 | 0.7294 | -0.3364 | 0.0005 |  | -1.5267 | -0.2713 | -0.5797 | 0.3096 | 0.0006 |
| 308.15 | 1.6446 | -0.1963 | 0.7802 | -0.4100 | 0.0006 |  | -1.3029 | -0.2221 | -0.5066 | 0.3289 | 0.0005 |
| 313.15 | 1.7585 | -0.2344 | 0.8406 | -0.4896 | 0.0007 |  | -1.1179 | -0.1891 | -0.4561 | 0.3512 | 0.0004 |
| 318.15 | 1.8854 | -0.2719 | 0.9058 | -0.5768 | 0.0008 |  | -0.9652 | -0.1565 | -0.4024 | 0.3534 | 0.0003 |
| 323.15 | 2.0245 | -0.3160 | 0.9810 | -0.6720 | 0.0009 |  | -0.8375 | -0.1046 | -0.4401 | 0.3878 | 0.0003 |
| 2,2,4-Trimethylpentane (1) + Decalin (2) | | | | | | | | | | | | |
| 293.15 | -3.6003 | -0.3428 | -0.0512 | -0.2628 | 0.0016 |  | -1.8036 | 0.6238 | -0.2180 | 0.0994 | 0.0001 |
| 298.15 | -3.7272 | -0.3588 | -0.0496 | -0.2649 | 0.0016 |  | -1.5786 | 0.5255 | -0.1584 | 0.0970 | 0.0001 |
| 303.15 | -3.8636 | -0.3890 | -0.0595 | -0.2644 | 0.0017 |  | -1.3941 | 0.4467 | -0.1400 | 0.0673 | 0.0000 |
| 308.15 | -4.0090 | -0.4200 | -0.0620 | -0.2510 | 0.0017 |  | -1.2381 | 0.3826 | -0.1162 | 0.0592 | 0.0000 |
| 313.15 | -4.1646 | -0.4472 | -0.0674 | -0.2598 | 0.0018 |  | -1.0979 | 0.3077 | -0.1071 | 0.0941 | 0.0000 |
| 318.15 | -4.3283 | -0.4749 | -0.0692 | -0.2754 | 0.0018 |  | -0.9897 | 0.2879 | -0.0750 | 0.0318 | 0.0000 |
| 323.15 | -4.5012 | -0.5080 | -0.0757 | -0.2905 | 0.0019 |  | -0.8904 | 0.2502 | -0.0590 | 0.0287 | 0.0000 |

**Table S6.** Correlation Coefficients (*Ci*) and Standard Deviations (σ) of and Δ*η* with the Clibuka Equation for the Ternary Mixtures of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) + Decalin (3) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Function* | */* cm3·mol-1 | | | |  | Δ*η* / mPa·s | | | |
| *T*/K | *C*1 | *C*2 | *C3* | *σ* |  | *C*1 | *C*2 | *C3* | *σ* |
| 293.15 | 4.0026 | -9.5632 | -2.4415 | 0.019 |  | -3.1847 | 2.3902 | 3.9583 | 0.001 |
| 298.15 | 4.3645 | -10.1254 | -2.5638 | 0.020 |  | -2.7412 | 2.1450 | 3.2572 | 0.001 |
| 303.15 | 4.6961 | -10.6915 | -2.4992 | 0.022 |  | -2.4217 | 2.1241 | 2.7173 | 0.001 |
| 308.15 | 5.1156 | -11.3275 | -2.5375 | 0.024 |  | -2.4060 | 1.9717 | 2.9286 | 0.002 |
| 313.15 | 5.5896 | -12.0230 | -2.6049 | 0.026 |  | -2.0038 | 1.8179 | 2.1873 | 0.001 |
| 318.15 | 6.1493 | -13.0226 | -2.6315 | 0.031 |  | -1.6937 | 1.5624 | 1.7614 | 0.001 |
| 323.15 | 6.6799 | -13.7309 | -2.6933 | 0.032 |  | -1.3219 | 1.1826 | 1.2412 | 0.000 |

**Table S7.** Correlation Coefficients (*Bi*) and Standard Deviations (*σ*) of and Δ*η* with the Nagata-Tamura Equation for the Ternary Mixtures of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) + Decalin (3) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *T /* K | *B*0 | *B*1 | *B*2 | *B*3 | *B*4 | *B*5 | *B*6 | *B*7 | *B*8 | *σ* |
|  | */* cm3·mol-1 | | | | | | | | | |
| 293.15 | 0.0020 | 0.0113 | -0.0021 | -0.0183 | 0.0052 | 0.0008 | 0.0084 | -0.0041 | 0.0109 | 0.009 |
| 298.15 | 0.0022 | 0.0129 | -0.0025 | -0.0228 | 0.0060 | 0.0005 | 0.0121 | -0.0045 | 0.0122 | 0.010 |
| 303.15 | 0.0024 | 0.0141 | -0.0029 | -0.0249 | 0.0071 | 0.0004 | 0.0133 | -0.0055 | 0.0119 | 0.010 |
| 308.15 | 0.0027 | 0.0152 | -0.0027 | -0.0271 | 0.0066 | 0.0005 | 0.0147 | -0.0050 | 0.0116 | 0.010 |
| 313.15 | 0.0030 | 0.0165 | -0.0028 | -0.0295 | 0.0066 | 0.0010 | 0.0163 | -0.0050 | 0.0110 | 0.010 |
| 318.15 | 0.0045 | 0.0212 | 0.0034 | -0.0362 | -0.0039 | -0.0043 | 0.0200 | 0.0011 | 0.0117 | 0.013 |
| 323.15 | 0.0036 | 0.0193 | -0.0026 | -0.0348 | 0.0060 | 0.0011 | 0.0197 | -0.0045 | 0.0107 | 0.011 |
|  | *Δη* / mPa·s | | | | | | | | | |
| 293.15 | -0.0012 | -0.0011 | -0.0017 | 0.0026 | 0.0001 | 0.0003 | -0.0027 | 0.0006 | -0.0034 | 0.001 |
| 298.15 | -0.0011 | -0.0017 | -0.0013 | 0.0035 | -0.0005 | 0.0007 | -0.0030 | 0.0011 | -0.0033 | 0.001 |
| 303.15 | -0.0010 | -0.0004 | -0.0007 | -0.0021 | -0.0019 | -0.0002 | 0.0021 | 0.0022 | 0.0011 | 0.001 |
| 308.15 | -0.0013 | -0.0016 | -0.0035 | 0.0030 | 0.0055 | -0.0002 | -0.0026 | -0.0034 | -0.0003 | 0.001 |
| 313.15 | -0.0009 | -0.0023 | -0.0006 | 0.0043 | -0.0012 | 0.0012 | -0.0028 | 0.0012 | -0.0031 | 0.000 |
| 318.15 | -0.0008 | -0.0022 | -0.0006 | 0.0039 | -0.0008 | 0.0012 | -0.0024 | 0.0009 | -0.0029 | 0.000 |
| 323.15 | -0.0004 | -0.0015 | 0.0005 | 0.0037 | -0.0018 | 0.0004 | -0.0025 | 0.0013 | -0.0031 | 0.000 |

**Table S8.** Correlation Coefficients (*Bi*) and Standard Deviations (*σ*) of and Δ*η* with the Redlich-Kister Equation for the Ternary Mixtures of Cyclopropanemethanol (1) + 2,2,4-Trimethylpentane (2) + Decalin (3) at *T* = (293.15 to 323.15) K and Pressure *P* = 0.1 MPa

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *T /* K | *A* | *B* | | *C* | | *D* | | *E* | | *F* | | *G* | | *σ* | | |
|  | */* cm3·mol-1 | | | | | | | | | | | | | | |
| 293.15 | -0.3553 | | -2.5893 | | 0.2268 | | 5.3510 | | 8.5210 | | -5.1190 | | 3.7166 | | 0.010 | | |
| 298.15 | -0.3649 | | -1.8784 | | -0.2201 | | 5.0909 | | 8.4069 | | -3.1432 | | 2.3975 | | 0.010 | | |
| 303.15 | -0.2391 | | -2.1377 | | -0.1864 | | 5.3155 | | 8.7281 | | -3.3976 | | 2.9198 | | 0.010 | | |
| 308.15 | -0.0876 | | -2.3791 | | -0.2029 | | 5.5725 | | 9.2100 | | -3.6386 | | 3.3411 | | 0.011 | | |
| 313.15 | 0.0842 | | -2.6341 | | -0.2339 | | 5.8576 | | 9.7854 | | -3.9182 | | 3.7777 | | 0.011 | | |
| 318.15 | 0.0948 | | -2.9190 | | -0.1710 | | 6.0784 | | 9.8107 | | -2.0035 | | 4.9994 | | 0.014 | | |
| 323.15 | 0.4737 | | -3.2723 | | -0.2713 | | 6.5309 | | 10.9056 | | -4.4692 | | 4.7713 | | 0.012 | | |
|  | *Δη* / mPa·s | | | | | | | | | | | | | | |
| 293.15 | -1.0566 | | 0.3702 | | 2.4433 | | 0.1802 | | -0.8669 | | -0.5159 | | 1.1975 | | 0.001 | | |
| 298.15 | -0.9050 | | 0.5537 | | 2.1864 | | 0.2550 | | -0.8944 | | -0.4338 | | 0.7826 | | 0.001 | | |
| 303.15 | -0.7549 | | 0.7970 | | 1.9142 | | 0.2855 | | -0.3456 | | -0.2739 | | -0.1900 | | 0.001 | | |
| 308.15 | -0.6785 | | 0.5898 | | 2.0809 | | 0.3249 | | -1.1429 | | -0.8935 | | 0.5964 | | 0.001 | | |
| 313.15 | -0.6162 | | 0.8863 | | 1.7763 | | 0.3349 | | -0.8446 | | 0.0919 | | -0.0528 | | 0.000 | | |
| 318.15 | -0.5261 | | 0.9487 | | 1.6297 | | 0.4198 | | -0.8559 | | 0.0854 | | -0.1441 | | 0.000 | | |
| 323.15 | -0.4841 | | 1.0016 | | 1.4789 | | 0.5181 | | -0.9856 | | 0.4289 | | 0.0979 | | 0.000 | | |