**Supplementary material**

**Viscometric properties of binary mixtures of 1,4-butanediol + cresols at different temperatures**

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Table S1: Experimental densities, ρ, of the binary mixtures of 1,4-butanediol (1) with cresols (2) at different temperatures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x1 | ρ (kg m-3) | | | |
| 303.15 K | 308.15 K | 313.15 K | 318.15 K |
| 1,4- butanediol + o-cresol | | | | |
| 0.0000 | 1036.6 | 1030.9 | 1026.3 | 1021.4 |
| 0.1001 | 1035.7 | 1030.0 | 1025.3 | 1020.3 |
| 0.2001 | 1034.2 | 1028.7 | 1023.9 | 1019.1 |
| 0.3002 | 1032.3 | 1027.0 | 1022.4 | 1017.7 |
| 0.4002 | 1030.0 | 1025.1 | 1020.7 | 1016.0 |
| 0.5002 | 1027.5 | 1022.8 | 1018.6 | 1014.2 |
| 0.6002 | 1024.6 | 1020.4 | 1016.3 | 1012.0 |
| 0.7002 | 1021.6 | 1017.6 | 1013.7 | 1009.5 |
| 0.8001 | 1018.2 | 1014.4 | 1010.8 | 1006.7 |
| 0.9001 | 1014.3 | 1010.9 | 1007.4 | 1003.7 |
| 1.0000 | 1009.4 | 1006.8 | 1003.8 | 1000.4 |
| 1,4- butanediol + m-cresol | | | | |
| 0.0000 | 1025.7 | 1021.9 | 1017.4 | 1013.6 |
| 0.0992 | 1025.6 | 1021.6 | 1017.0 | 1013.0 |
| 0.1986 | 1024.9 | 1020.9 | 1016.3 | 1012.2 |
| 0.2982 | 1024.1 | 1020.1 | 1015.4 | 1011.3 |
| 0.3979 | 1022.9 | 1019.0 | 1014.4 | 1010.2 |
| 0.4979 | 1021.4 | 1017.6 | 1013.1 | 1009.0 |
| 0.5979 | 1019.7 | 1016.0 | 1011.7 | 1007.6 |
| 0.6982 | 1017.8 | 1014.2 | 1010.1 | 1006.1 |
| 0.7986 | 1015.5 | 1012.1 | 1008.3 | 1004.4 |
| 0.8992 | 1012.7 | 1009.6 | 1006.2 | 1002.6 |
| 1.0000 | 1009.4 | 1006.8 | 1003.8 | 1000.4 |
| 1,4- butanediol + p- cresol | | | | |
| 0.0000 | 1026.6 | 1022.4 | 1019.0 | 1014.3 |
| 0.0961 | 1026.3 | 1022.0 | 1018.3 | 1013.5 |
| 0.1931 | 1025.7 | 1021.3 | 1017.5 | 1012.7 |
| 0.2909 | 1024.7 | 1020.4 | 1016.6 | 1011.7 |
| 0.3895 | 1023.5 | 1019.3 | 1015.4 | 1010.6 |
| 0.4890 | 1022.0 | 1017.9 | 1014.0 | 1009.3 |
| 0.5894 | 1020.2 | 1016.3 | 1012.5 | 1007.9 |
| 0.6907 | 1018.2 | 1014.4 | 1010.7 | 1006.3 |
| 0.7929 | 1015.8 | 1012.2 | 1008.6 | 1004.5 |
| 0.8960 | 1012.8 | 1009.7 | 1006.4 | 1002.6 |
| 1.0000 | 1009.4 | 1006.8 | 1003.8 | 1000.4 |

Table S2: Molar volume, Vm, of the binary mixtures of 1,4-butanediol (1) with cresols (2) at different temperatures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| x1 | Vm (106 m3 mol-1) | | | |
| 303.15 K | 308.15 K | 313.15 K | 318.15 K |
| 1,4- butanediol + o-cresol | | | | |
| 0.0000 | 104.32 | 104.90 | 105.37 | 105.88 |
| 0.1001 | 102.67 | 103.24 | 103.72 | 104.22 |
| 0.2001 | 101.08 | 101.62 | 102.09 | 102.58 |
| 0.3002 | 99.52 | 100.03 | 100.48 | 100.95 |
| 0.4002 | 97.99 | 98.46 | 98.88 | 99.33 |
| 0.5002 | 96.48 | 96.91 | 97.31 | 97.74 |
| 0.6002 | 94.98 | 95.38 | 95.76 | 96.17 |
| 0.7002 | 93.50 | 93.87 | 94.23 | 94.62 |
| 0.8001 | 92.05 | 92.39 | 92.72 | 93.10 |
| 0.9001 | 90.63 | 90.93 | 91.24 | 91.58 |
| 1.0000 | 89.28 | 89.51 | 89.78 | 90.08 |
| 1,4- butanediol + m-cresol | | | | |
| 0.0000 | 105.43 | 105.82 | 106.29 | 106.69 |
| 0.0992 | 103.70 | 104.11 | 104.58 | 104.98 |
| 0.1986 | 102.02 | 102.42 | 102.88 | 103.30 |
| 0.2982 | 100.35 | 100.75 | 101.21 | 101.62 |
| 0.3979 | 98.71 | 99.09 | 99.54 | 99.95 |
| 0.4979 | 97.09 | 97.45 | 97.88 | 98.29 |
| 0.5979 | 95.48 | 95.83 | 96.24 | 96.63 |
| 0.6982 | 93.89 | 94.22 | 94.60 | 94.98 |
| 0.7986 | 92.32 | 92.63 | 92.98 | 93.34 |
| 0.8992 | 90.78 | 91.06 | 91.37 | 91.70 |
| 1.0000 | 89.28 | 89.51 | 89.78 | 90.08 |
| 1,4- butanediol + p- cresol | | | | |
| 0.0000 | 105.33 | 105.77 | 106.13 | 106.62 |
| 0.0961 | 103.68 | 104.12 | 104.49 | 104.99 |
| 0.1931 | 102.04 | 102.48 | 102.86 | 103.35 |
| 0.2909 | 100.42 | 100.84 | 101.22 | 101.71 |
| 0.3895 | 98.80 | 99.21 | 99.59 | 100.06 |
| 0.4890 | 97.19 | 97.58 | 97.95 | 98.41 |
| 0.5894 | 95.59 | 95.95 | 96.32 | 96.75 |
| 0.6907 | 93.99 | 94.33 | 94.68 | 95.09 |
| 0.7929 | 92.40 | 92.72 | 93.05 | 93.43 |
| 0.8960 | 90.83 | 91.11 | 91.41 | 91.76 |
| 1.0000 | 89.28 | 89.51 | 89.78 | 90.08 |