SUPLEMENTARY MATERIAL

**Modelling of pure components high pressures densities using CK-SAFT and PC-SAFT equations**

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TABLE SI: Equations for the dispersion term used in different SAFT equations

|  |  |
| --- | --- |
| SAFT type | Dispersion term (*adisp*) |
| Original SAFT | |
|  | |
| CK-SAFT | |
| SAFT-VR | |
| PC-SAFT | |

TABLE SII: Calculated densities for the investigated pure components using CK-SAFT equation

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *ρ*/kgˑm-3 | | | | | | | | | | | | | | | |
| *P*/MPa | *T*/K | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| ***n*-Hexane** | | | | | | | | | | | | | | | | |
| **0.1** | 665.3 | 660.4 | 655.5 | 650.6 | 645.7 | 640.9 | 636.0 | 631.1 | 626.3 | 621.4 |  |  |  |  |  |  |
| **1** | 666.2 | 661.3 | 656.5 | 651.6 | 646.8 | 641.9 | 637.1 | 632.3 | 627.4 | 622.6 | 612.9 | 603.3 | 593.6 | 583.8 | 564.2 | 544.2 |
| **5** | 670.2 | 665.4 | 660.7 | 656.0 | 651.2 | 646.5 | 641.8 | 637.1 | 632.5 | 627.8 | 618.5 | 609.1 | 599.8 | 590.5 | 571.7 | 552.8 |
| **10** | 674.9 | 670.3 | 665.7 | 661.1 | 656.6 | 652.0 | 647.4 | 642.9 | 638.4 | 633.9 | 624.9 | 615.9 | 607.0 | 598.1 | 580.3 | 562.4 |
| **15** | 679.5 | 675.0 | 670.5 | 666.0 | 661.6 | 657.1 | 652.7 | 648.3 | 644.0 | 639.6 | 630.9 | 622.3 | 613.7 | 605.1 | 588.1 | 571.1 |
| **20** | 683.8 | 679.4 | 675.0 | 670.7 | 666.3 | 662.0 | 657.7 | 653.5 | 649.2 | 645.0 | 636.6 | 628.2 | 619.9 | 611.7 | 595.3 | 579.0 |
| **25** | 687.9 | 683.6 | 679.4 | 675.1 | 670.9 | 666.7 | 662.5 | 658.3 | 654.2 | 650.1 | 641.9 | 633.8 | 625.8 | 617.8 | 602.0 | 586.3 |
| **30** | 691.9 | 687.7 | 683.5 | 679.4 | 675.2 | 671.1 | 667.0 | 663.0 | 658.9 | 654.9 | 647.0 | 639.1 | 631.3 | 623.5 | 608.2 | 593.1 |
| **35** | 695.7 | 691.6 | 687.5 | 683.4 | 679.4 | 675.4 | 671.4 | 667.4 | 663.5 | 659.5 | 651.8 | 644.1 | 636.5 | 628.9 | 614.1 | 599.5 |
| **40** | 699.4 | 695.4 | 691.3 | 687.4 | 683.4 | 679.4 | 675.5 | 671.7 | 667.8 | 664.0 | 656.4 | 648.9 | 641.4 | 634.1 | 619.6 | 605.5 |
| **45** | 703.0 | 699.0 | 695.1 | 691.1 | 687.2 | 683.4 | 679.5 | 675.7 | 671.9 | 668.2 | 660.8 | 653.4 | 646.2 | 639.0 | 624.9 | 611.1 |
| **50** | 706.4 | 702.5 | 698.6 | 694.8 | 690.9 | 687.2 | 683.4 | 679.6 | 675.9 | 672.3 | 665.0 | 657.8 | 650.7 | 643.7 | 629.9 | 616.4 |
| **55** | 709.8 | 705.9 | 702.1 | 698.3 | 694.5 | 690.8 | 687.1 | 683.4 | 679.8 | 676.2 | 669.0 | 662.0 | 655.0 | 648.2 | 634.7 | 621.5 |
| **60** | 713.0 | 709.2 | 705.4 | 701.7 | 698.0 | 694.3 | 690.7 | 687.1 | 683.5 | 679.9 | 672.9 | 666.0 | 659.2 | 652.5 | 639.3 | 626.4 |
| ***n*-Heptane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 689.9 | 685.1 | 680.3 | 675.5 | 670.7 | 666.0 | 661.2 | 656.5 | 651.8 | 647.0 | 637.6 | 628.2 | 618.8 |  |  |  |
| **1** | 690.8 | 686.0 | 681.2 | 676.4 | 671.7 | 667.0 | 662.2 | 657.5 | 652.8 | 648.1 | 638.8 | 629.4 | 620.1 | 610.7 | 592.0 | 573.0 |
| **5** | 694.5 | 689.8 | 685.2 | 680.5 | 675.9 | 671.3 | 666.7 | 662.1 | 657.5 | 653.0 | 643.9 | 634.8 | 625.8 | 616.7 | 598.7 | 580.6 |
| **10** | 699.0 | 694.5 | 689.9 | 685.4 | 680.9 | 676.4 | 671.9 | 667.5 | 663.1 | 658.6 | 649.9 | 641.1 | 632.4 | 623.7 | 606.5 | 589.3 |
| **15** | 703.3 | 698.9 | 694.4 | 690.0 | 685.6 | 681.3 | 676.9 | 672.6 | 668.3 | 664.0 | 655.5 | 647.0 | 638.6 | 630.3 | 613.7 | 597.2 |
| **20** | 707.5 | 703.1 | 698.8 | 694.5 | 690.2 | 685.9 | 681.7 | 677.5 | 673.3 | 669.1 | 660.8 | 652.6 | 644.4 | 636.3 | 620.3 | 604.5 |
| **25** | 711.4 | 707.2 | 702.9 | 698.7 | 694.5 | 690.3 | 686.2 | 682.1 | 678.0 | 673.9 | 665.8 | 657.9 | 649.9 | 642.1 | 626.6 | 611.3 |
| **30** | 715.3 | 711.1 | 706.9 | 702.8 | 698.7 | 694.6 | 690.5 | 686.5 | 682.5 | 678.5 | 670.7 | 662.9 | 655.1 | 647.5 | 632.4 | 617.6 |
| **35** | 718.9 | 714.8 | 710.7 | 706.7 | 702.7 | 698.7 | 694.7 | 690.7 | 686.8 | 682.9 | 675.2 | 667.6 | 660.1 | 652.7 | 638.0 | 623.6 |
| **40** | 722.5 | 718.5 | 714.4 | 710.5 | 706.5 | 702.6 | 698.7 | 694.8 | 691.0 | 687.2 | 679.6 | 672.2 | 664.8 | 657.6 | 643.3 | 629.3 |
| **45** | 725.9 | 722.0 | 718.0 | 714.1 | 710.2 | 706.4 | 702.5 | 698.7 | 695.0 | 691.2 | 683.9 | 676.6 | 669.4 | 662.2 | 648.3 | 634.6 |
| **50** | 729.3 | 725.4 | 721.5 | 717.6 | 713.8 | 710.0 | 706.3 | 702.5 | 698.8 | 695.2 | 687.9 | 680.8 | 673.7 | 666.7 | 653.1 | 639.7 |
| **55** | 732.5 | 728.7 | 724.8 | 721.0 | 717.3 | 713.6 | 709.9 | 706.2 | 702.6 | 698.9 | 691.8 | 684.8 | 677.9 | 671.0 | 657.7 | 644.6 |
| **60** | 735.7 | 731.9 | 728.1 | 724.4 | 720.6 | 717.0 | 713.3 | 709.7 | 706.1 | 702.6 | 695.6 | 688.7 | 681.9 | 675.2 | 662.1 | 649.3 |
| ***n*-Octane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 708.4 | 703.6 | 698.9 | 694.1 | 689.4 | 684.7 | 680.1 | 675.4 | 670.7 | 666.1 | 656.8 | 647.6 | 638.3 | 629.1 | 610.7 |  |
| **1** | 709.2 | 704.5 | 699.8 | 695.1 | 690.4 | 685.7 | 681.0 | 676.4 | 671.8 | 667.1 | 657.9 | 648.8 | 639.6 | 630.5 | 612.2 | 593.9 |
| **5** | 712.9 | 708.2 | 703.6 | 699.0 | 694.4 | 689.8 | 685.3 | 680.8 | 676.2 | 671.7 | 662.8 | 653.9 | 645.0 | 636.1 | 618.5 | 600.9 |
| **10** | 717.3 | 712.7 | 708.2 | 703.7 | 699.2 | 694.8 | 690.4 | 686.0 | 681.6 | 677.2 | 668.5 | 659.9 | 651.3 | 642.8 | 625.9 | 609.0 |
| **15** | 721.4 | 717.0 | 712.6 | 708.2 | 703.8 | 699.5 | 695.2 | 690.9 | 686.6 | 682.4 | 673.9 | 665.6 | 657.3 | 649.0 | 632.7 | 616.5 |
| **20** | 725.5 | 721.1 | 716.8 | 712.5 | 708.2 | 704.0 | 699.8 | 695.6 | 691.4 | 687.3 | 679.1 | 670.9 | 662.9 | 654.9 | 639.1 | 623.5 |
| **25** | 729.3 | 725.1 | 720.8 | 716.6 | 712.5 | 708.3 | 704.2 | 700.1 | 696.0 | 692.0 | 684.0 | 676.0 | 668.2 | 660.4 | 645.1 | 630.0 |
| **30** | 733.1 | 728.9 | 724.7 | 720.6 | 716.5 | 712.5 | 708.4 | 704.4 | 700.4 | 696.5 | 688.6 | 680.9 | 673.2 | 665.6 | 650.7 | 636.1 |
| **35** | 736.7 | 732.6 | 728.5 | 724.4 | 720.4 | 716.4 | 712.5 | 708.5 | 704.6 | 700.8 | 693.1 | 685.5 | 678.0 | 670.6 | 656.1 | 641.8 |
| **40** | 740.2 | 736.1 | 732.1 | 728.1 | 724.2 | 720.3 | 716.4 | 712.5 | 708.7 | 704.9 | 697.4 | 690.0 | 682.6 | 675.4 | 661.2 | 647.3 |
| **45** | 743.6 | 739.6 | 735.6 | 731.7 | 727.8 | 724.0 | 720.2 | 716.4 | 712.6 | 708.9 | 701.5 | 694.2 | 687.0 | 680.0 | 666.1 | 652.5 |
| **50** | 746.9 | 742.9 | 739.0 | 735.2 | 731.4 | 727.6 | 723.8 | 720.1 | 716.4 | 712.7 | 705.5 | 698.3 | 691.3 | 684.3 | 670.7 | 657.4 |
| **55** | 750.1 | 746.2 | 742.3 | 738.5 | 734.8 | 731.0 | 727.3 | 723.7 | 720.0 | 716.4 | 709.3 | 702.3 | 695.4 | 688.5 | 675.2 | 662.2 |
| **60** | 753.2 | 749.3 | 745.6 | 741.8 | 738.1 | 734.4 | 730.8 | 727.1 | 723.6 | 720.0 | 713.0 | 706.1 | 699.3 | 692.6 | 679.5 | 666.7 |
| **Toluene** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 870.8 | 866.1 | 861.4 | 856.7 | 852.0 | 847.3 | 842.7 | 838.0 | 833.3 | 828.6 | 819.2 | 809.8 | 800.4 | 791.0 |  |  |
| **1** | 871.5 | 866.8 | 862.1 | 857.5 | 852.8 | 848.1 | 843.4 | 838.8 | 834.1 | 829.4 | 820.1 | 810.7 | 801.4 | 792.1 | 773.4 | 754.6 |
| **5** | 874.5 | 869.9 | 865.3 | 860.7 | 856.1 | 851.5 | 846.9 | 842.3 | 837.7 | 833.1 | 823.9 | 814.8 | 805.7 | 796.5 | 778.3 | 760.0 |
| **10** | 878.1 | 873.6 | 869.1 | 864.6 | 860.1 | 855.5 | 851.0 | 846.5 | 842.0 | 837.6 | 828.6 | 819.7 | 810.7 | 801.9 | 784.1 | 766.5 |
| **15** | 881.7 | 877.2 | 872.8 | 868.3 | 863.9 | 859.5 | 855.1 | 850.6 | 846.2 | 841.8 | 833.1 | 824.3 | 815.6 | 806.9 | 789.7 | 772.5 |
| **20** | 885.1 | 880.7 | 876.3 | 872.0 | 867.6 | 863.3 | 858.9 | 854.6 | 850.3 | 846.0 | 837.3 | 828.8 | 820.3 | 811.8 | 794.9 | 778.2 |
| **25** | 888.4 | 884.1 | 879.8 | 875.5 | 871.2 | 867.0 | 862.7 | 858.4 | 854.2 | 849.9 | 841.5 | 833.1 | 824.7 | 816.4 | 800.0 | 783.7 |
| **30** | 891.7 | 887.4 | 883.2 | 879.0 | 874.7 | 870.5 | 866.3 | 862.1 | 858.0 | 853.8 | 845.5 | 837.2 | 829.1 | 820.9 | 804.8 | 788.9 |
| **35** | 894.9 | 890.7 | 886.5 | 882.3 | 878.2 | 874.0 | 869.9 | 865.7 | 861.6 | 857.5 | 849.4 | 841.3 | 833.2 | 825.2 | 809.4 | 793.9 |
| **40** | 898.0 | 893.8 | 889.7 | 885.6 | 881.5 | 877.4 | 873.3 | 869.2 | 865.2 | 861.1 | 853.1 | 845.1 | 837.2 | 829.4 | 813.9 | 798.6 |
| **45** | 901.0 | 896.9 | 892.8 | 888.8 | 884.7 | 880.7 | 876.7 | 872.6 | 868.6 | 864.7 | 856.7 | 848.9 | 841.1 | 833.4 | 818.2 | 803.2 |
| **50** | 904.0 | 899.9 | 895.9 | 891.9 | 887.9 | 883.9 | 879.9 | 876.0 | 872.0 | 868.1 | 860.3 | 852.6 | 844.9 | 837.3 | 822.3 | 807.6 |
| **55** | 906.9 | 902.9 | 898.9 | 894.9 | 891.0 | 887.0 | 883.1 | 879.2 | 875.3 | 871.4 | 863.7 | 856.1 | 848.5 | 841.1 | 826.3 | 811.9 |
| **60** | 909.7 | 905.8 | 901.8 | 897.9 | 894.0 | 890.1 | 886.2 | 882.3 | 878.5 | 874.7 | 867.1 | 859.5 | 852.1 | 844.7 | 830.2 | 816.0 |
| **Dichloromethane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 1334.4 | 1324.8 | 1315.2 | 1305.6 | 1296.0 | 1286.3 |  |  |  |  |  |  |  |  |  |  |
| **1** | 1335.6 | 1326.1 | 1316.5 | 1307.0 | 1297.4 | 1287.8 | 1278.1 | 1268.4 | 1258.7 | 1248.9 | 1229.3 | 1209.4 | 1189.3 | 1169.0 | 1127.4 | 1084.1 |
| **5** | 1340.9 | 1331.6 | 1322.2 | 1312.9 | 1303.4 | 1294.0 | 1284.6 | 1275.1 | 1265.6 | 1256.1 | 1236.9 | 1217.6 | 1198.1 | 1178.5 | 1138.4 | 1097.1 |
| **10** | 1347.4 | 1338.3 | 1329.1 | 1319.9 | 1310.7 | 1301.5 | 1292.3 | 1283.1 | 1273.9 | 1264.6 | 1246.0 | 1227.3 | 1208.5 | 1189.6 | 1151.3 | 1112.1 |
| **15** | 1353.6 | 1344.7 | 1335.7 | 1326.7 | 1317.7 | 1308.8 | 1299.8 | 1290.8 | 1281.7 | 1272.7 | 1254.6 | 1236.5 | 1218.3 | 1200.0 | 1163.1 | 1125.7 |
| **20** | 1359.7 | 1350.9 | 1342.1 | 1333.3 | 1324.5 | 1315.7 | 1306.9 | 1298.1 | 1289.3 | 1280.5 | 1262.9 | 1245.2 | 1227.5 | 1209.8 | 1174.2 | 1138.2 |
| **25** | 1365.5 | 1356.9 | 1348.2 | 1339.6 | 1331.0 | 1322.3 | 1313.7 | 1305.1 | 1296.5 | 1287.9 | 1270.7 | 1253.5 | 1236.3 | 1219.1 | 1184.6 | 1149.9 |
| **30** | 1371.2 | 1362.7 | 1354.2 | 1345.7 | 1337.2 | 1328.8 | 1320.3 | 1311.9 | 1303.5 | 1295.0 | 1278.2 | 1261.4 | 1244.7 | 1227.9 | 1194.4 | 1160.9 |
| **35** | 1376.7 | 1368.3 | 1360.0 | 1351.6 | 1343.3 | 1335.0 | 1326.7 | 1318.4 | 1310.2 | 1301.9 | 1285.4 | 1269.0 | 1252.6 | 1236.3 | 1203.7 | 1171.2 |
| **40** | 1382.0 | 1373.8 | 1365.6 | 1357.4 | 1349.2 | 1341.0 | 1332.9 | 1324.7 | 1316.6 | 1308.5 | 1292.4 | 1276.3 | 1260.3 | 1244.3 | 1212.5 | 1180.9 |
| **45** | 1387.2 | 1379.1 | 1371.0 | 1362.9 | 1354.9 | 1346.9 | 1338.8 | 1330.8 | 1322.9 | 1314.9 | 1299.1 | 1283.3 | 1267.6 | 1252.0 | 1221.0 | 1190.1 |
| **50** | 1392.3 | 1384.3 | 1376.3 | 1368.4 | 1360.4 | 1352.5 | 1344.6 | 1336.8 | 1328.9 | 1321.1 | 1305.5 | 1290.1 | 1274.7 | 1259.4 | 1229.0 | 1198.9 |
| **55** | 1397.2 | 1389.4 | 1381.5 | 1373.6 | 1365.8 | 1358.0 | 1350.2 | 1342.5 | 1334.8 | 1327.1 | 1311.8 | 1296.6 | 1281.5 | 1266.5 | 1236.8 | 1207.3 |
| **60** | 1402.1 | 1394.3 | 1386.5 | 1378.8 | 1371.1 | 1363.4 | 1355.7 | 1348.1 | 1340.5 | 1332.9 | 1317.9 | 1302.9 | 1288.1 | 1273.3 | 1244.2 | 1215.4 |
| **Ethanol** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 797.7 | 793.1 | 788.4 | 783.7 | 779.0 | 774.2 | 769.5 | 764.6 | 759.8 | 754.9 | 745.0 |  |  |  |  |  |
| **1** | 798.4 | 793.7 | 789.1 | 784.4 | 779.7 | 775.0 | 770.3 | 765.5 | 760.7 | 755.8 | 745.9 | 735.9 | 725.5 | 715.0 | 692.9 | 669.4 |
| **5** | 801.3 | 796.7 | 792.1 | 787.6 | 783.0 | 778.4 | 773.7 | 769.1 | 764.4 | 759.6 | 750.0 | 740.3 | 730.3 | 720.1 | 698.9 | 676.6 |
| **10** | 804.8 | 800.3 | 795.8 | 791.4 | 786.9 | 782.4 | 777.9 | 773.4 | 768.8 | 764.2 | 754.9 | 745.5 | 735.9 | 726.1 | 705.9 | 684.8 |
| **15** | 808.1 | 803.8 | 799.4 | 795.0 | 790.7 | 786.3 | 781.9 | 777.5 | 773.0 | 768.6 | 759.5 | 750.4 | 741.1 | 731.7 | 712.3 | 692.2 |
| **20** | 811.4 | 807.1 | 802.8 | 798.6 | 794.3 | 790.0 | 785.7 | 781.4 | 777.1 | 772.7 | 764.0 | 755.1 | 746.1 | 737.0 | 718.3 | 699.1 |
| **25** | 814.5 | 810.3 | 806.2 | 802.0 | 797.8 | 793.6 | 789.4 | 785.2 | 781.0 | 776.7 | 768.2 | 759.5 | 750.8 | 741.9 | 723.9 | 705.4 |
| **30** | 817.6 | 813.5 | 809.4 | 805.3 | 801.2 | 797.1 | 793.0 | 788.8 | 784.7 | 780.6 | 772.2 | 763.8 | 755.3 | 746.7 | 729.2 | 711.4 |
| **35** | 820.6 | 816.5 | 812.5 | 808.5 | 804.5 | 800.4 | 796.4 | 792.4 | 788.3 | 784.3 | 776.1 | 767.9 | 759.6 | 751.2 | 734.2 | 716.9 |
| **40** | 823.5 | 819.5 | 815.5 | 811.6 | 807.6 | 803.7 | 799.7 | 795.8 | 791.8 | 787.8 | 779.9 | 771.8 | 763.7 | 755.5 | 739.0 | 722.2 |
| **45** | 826.3 | 822.4 | 818.5 | 814.6 | 810.7 | 806.8 | 803.0 | 799.1 | 795.2 | 791.3 | 783.5 | 775.6 | 767.7 | 759.7 | 743.6 | 727.2 |
| **50** | 829.1 | 825.2 | 821.4 | 817.5 | 813.7 | 809.9 | 806.1 | 802.3 | 798.5 | 794.6 | 787.0 | 779.2 | 771.5 | 763.7 | 747.9 | 732.0 |
| **55** | 831.8 | 828.0 | 824.2 | 820.4 | 816.7 | 812.9 | 809.2 | 805.4 | 801.7 | 797.9 | 790.3 | 782.8 | 775.2 | 767.5 | 752.1 | 736.6 |
| **60** | 834.4 | 830.7 | 826.9 | 823.2 | 819.5 | 815.8 | 812.1 | 808.4 | 804.7 | 801.0 | 793.6 | 786.2 | 778.7 | 771.2 | 756.1 | 741.0 |

TABLE SIII: Calculated densities for the investigated pure components using PC – SAFT equation

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *ρ*/kgˑm-3 | | | | | | | | | | | | | | | |
| *P*/Mpa | *T*/K | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| ***n*-Hexane** | | | | | | | | | | | | | | | | |
| **0.1** | 663.2 | 658.9 | 654.6 | 650.3 | 645.9 | 641.5 | 637.0 | 632.5 | 627.9 | 623.3 |  |  |  |  |  |  |
| **1** | 664.1 | 659.8 | 655.6 | 651.3 | 646.9 | 642.5 | 638.1 | 633.6 | 629.1 | 624.5 | 615.1 | 605.4 | 595.3 | 584.8 | 562.0 | 536.1 |
| **5** | 667.9 | 663.7 | 659.6 | 655.4 | 651.2 | 647.0 | 642.7 | 638.4 | 634.0 | 629.6 | 620.7 | 611.5 | 602.0 | 592.2 | 571.2 | 548.0 |
| **10** | 672.4 | 668.4 | 664.4 | 660.3 | 656.3 | 652.2 | 648.1 | 644.0 | 639.8 | 635.7 | 627.1 | 618.5 | 609.6 | 600.4 | 581.2 | 560.4 |
| **15** | 676.6 | 672.8 | 668.9 | 665.0 | 661.1 | 657.1 | 653.2 | 649.2 | 645.2 | 641.2 | 633.1 | 624.9 | 616.4 | 607.8 | 590.0 | 571.0 |
| **20** | 680.7 | 676.9 | 673.2 | 669.4 | 665.6 | 661.8 | 658.0 | 654.2 | 650.3 | 646.5 | 638.7 | 630.8 | 622.8 | 614.6 | 597.8 | 580.2 |
| **25** | 684.6 | 680.9 | 677.3 | 673.6 | 669.9 | 666.2 | 662.5 | 658.8 | 655.1 | 651.4 | 643.9 | 636.3 | 628.6 | 620.9 | 604.9 | 588.4 |
| **30** | 688.3 | 684.8 | 681.2 | 677.6 | 674.0 | 670.4 | 666.8 | 663.2 | 659.6 | 656.0 | 648.8 | 641.5 | 634.1 | 626.7 | 611.5 | 595.8 |
| **35** | 691.9 | 688.4 | 684.9 | 681.4 | 677.9 | 674.4 | 670.9 | 667.4 | 663.9 | 660.4 | 653.4 | 646.3 | 639.2 | 632.1 | 617.5 | 602.6 |
| **40** | 695.4 | 692.0 | 688.5 | 685.1 | 681.7 | 678.3 | 674.9 | 671.4 | 668.0 | 664.6 | 657.8 | 651.0 | 644.1 | 637.2 | 623.2 | 608.9 |
| **45** | 698.7 | 695.4 | 692.0 | 688.6 | 685.3 | 682.0 | 678.6 | 675.3 | 672.0 | 668.7 | 662.0 | 655.4 | 648.7 | 642.0 | 628.5 | 614.8 |
| **50** | 702.0 | 698.6 | 695.3 | 692.1 | 688.8 | 685.5 | 682.2 | 679.0 | 675.7 | 672.5 | 666.0 | 659.6 | 653.1 | 646.6 | 633.5 | 620.3 |
| **55** | 705.1 | 701.8 | 698.6 | 695.4 | 692.1 | 688.9 | 685.7 | 682.6 | 679.4 | 676.2 | 669.9 | 663.6 | 657.2 | 650.9 | 638.3 | 625.5 |
| **60** | 708.1 | 704.9 | 701.7 | 698.5 | 695.4 | 692.2 | 689.1 | 686.0 | 682.9 | 679.8 | 673.6 | 667.4 | 661.2 | 655.1 | 642.8 | 630.4 |
| ***n*-Heptane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 687.5 | 683.4 | 679.3 | 675.2 | 671.1 | 666.9 | 662.7 | 658.5 | 654.2 | 649.9 | 641.2 | 632.3 | 623.1 |  |  |  |
| **1** | 688.3 | 684.3 | 680.2 | 676.1 | 671.9 | 667.8 | 663.6 | 659.4 | 655.2 | 651.0 | 642.3 | 633.5 | 624.4 | 615.1 | 595.5 | 574.2 |
| **5** | 691.8 | 687.8 | 683.8 | 679.8 | 675.8 | 671.8 | 667.7 | 663.7 | 659.6 | 655.5 | 647.1 | 638.7 | 630.0 | 621.2 | 602.7 | 582.9 |
| **10** | 695.9 | 692.0 | 688.1 | 684.3 | 680.4 | 676.5 | 672.6 | 668.6 | 664.7 | 660.8 | 652.8 | 644.7 | 636.5 | 628.1 | 610.8 | 592.5 |
| **15** | 699.8 | 696.1 | 692.3 | 688.5 | 684.7 | 680.9 | 677.2 | 673.4 | 669.6 | 665.7 | 658.1 | 650.3 | 642.4 | 634.5 | 618.1 | 601.0 |
| **20** | 703.6 | 699.9 | 696.2 | 692.6 | 688.9 | 685.2 | 681.5 | 677.8 | 674.1 | 670.5 | 663.0 | 655.6 | 648.0 | 640.4 | 624.8 | 608.7 |
| **25** | 707.3 | 703.6 | 700.0 | 696.4 | 692.9 | 689.3 | 685.7 | 682.1 | 678.5 | 674.9 | 667.7 | 660.5 | 653.2 | 645.9 | 631.0 | 615.7 |
| **30** | 710.8 | 707.2 | 703.7 | 700.2 | 696.7 | 693.2 | 689.7 | 686.2 | 682.7 | 679.2 | 672.2 | 665.2 | 658.2 | 651.1 | 636.8 | 622.2 |
| **35** | 714.2 | 710.7 | 707.2 | 703.8 | 700.3 | 696.9 | 693.5 | 690.1 | 686.7 | 683.3 | 676.5 | 669.7 | 662.8 | 656.0 | 642.2 | 628.2 |
| **40** | 717.4 | 714.0 | 710.6 | 707.2 | 703.9 | 700.5 | 697.2 | 693.8 | 690.5 | 687.2 | 680.5 | 673.9 | 667.3 | 660.7 | 647.3 | 633.8 |
| **45** | 720.6 | 717.2 | 713.9 | 710.6 | 707.3 | 704.0 | 700.7 | 697.4 | 694.2 | 690.9 | 684.5 | 678.0 | 671.5 | 665.1 | 652.1 | 639.1 |
| **50** | 723.7 | 720.4 | 717.1 | 713.8 | 710.6 | 707.3 | 704.1 | 700.9 | 697.7 | 694.5 | 688.2 | 681.9 | 675.6 | 669.3 | 656.7 | 644.1 |
| **55** | 726.7 | 723.4 | 720.2 | 717.0 | 713.8 | 710.6 | 707.4 | 704.3 | 701.2 | 698.0 | 691.8 | 685.6 | 679.5 | 673.4 | 661.1 | 648.8 |
| **60** | 729.6 | 726.4 | 723.2 | 720.0 | 716.9 | 713.7 | 710.6 | 707.5 | 704.5 | 701.4 | 695.3 | 689.3 | 683.2 | 677.2 | 665.3 | 653.3 |
| ***n*-Octane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 705.8 | 701.8 | 697.9 | 693.9 | 689.9 | 685.9 | 681.9 | 677.9 | 673.8 | 669.8 | 661.6 | 653.3 | 644.8 | 636.1 | 618.1 |  |
| **1** | 706.6 | 702.6 | 698.6 | 694.7 | 690.7 | 686.8 | 682.8 | 678.8 | 674.8 | 670.7 | 662.6 | 654.3 | 645.9 | 637.4 | 619.6 | 600.7 |
| **5** | 709.8 | 705.9 | 702.0 | 698.2 | 694.3 | 690.4 | 686.5 | 682.6 | 678.7 | 674.8 | 666.9 | 659.0 | 650.9 | 642.6 | 625.7 | 607.9 |
| **10** | 713.6 | 709.9 | 706.1 | 702.3 | 698.5 | 694.8 | 691.0 | 687.2 | 683.5 | 679.7 | 672.1 | 664.4 | 656.6 | 648.8 | 632.7 | 616.0 |
| **15** | 717.4 | 713.7 | 710.0 | 706.3 | 702.6 | 698.9 | 695.3 | 691.6 | 687.9 | 684.3 | 676.9 | 669.5 | 662.0 | 654.5 | 639.2 | 623.4 |
| **20** | 721.0 | 717.3 | 713.7 | 710.1 | 706.5 | 702.9 | 699.4 | 695.8 | 692.2 | 688.7 | 681.5 | 674.3 | 667.1 | 659.9 | 645.2 | 630.1 |
| **25** | 724.4 | 720.9 | 717.3 | 713.8 | 710.3 | 706.8 | 703.3 | 699.8 | 696.3 | 692.8 | 685.9 | 678.9 | 672.0 | 665.0 | 650.8 | 636.4 |
| **30** | 727.8 | 724.3 | 720.8 | 717.3 | 713.9 | 710.5 | 707.0 | 703.6 | 700.2 | 696.8 | 690.1 | 683.3 | 676.5 | 669.7 | 656.1 | 642.2 |
| **35** | 731.0 | 727.6 | 724.2 | 720.8 | 717.4 | 714.0 | 710.7 | 707.3 | 704.0 | 700.7 | 694.1 | 687.5 | 680.9 | 674.3 | 661.1 | 647.7 |
| **40** | 734.2 | 730.8 | 727.4 | 724.1 | 720.8 | 717.4 | 714.2 | 710.9 | 707.6 | 704.4 | 697.9 | 691.5 | 685.0 | 678.6 | 665.8 | 652.9 |
| **45** | 737.2 | 733.9 | 730.6 | 727.3 | 724.0 | 720.8 | 717.5 | 714.3 | 711.1 | 707.9 | 701.6 | 695.3 | 689.0 | 682.8 | 670.3 | 657.8 |
| **50** | 740.2 | 736.9 | 733.6 | 730.4 | 727.2 | 724.0 | 720.8 | 717.7 | 714.5 | 711.4 | 705.2 | 699.0 | 692.9 | 686.8 | 674.6 | 662.4 |
| **55** | 743.1 | 739.8 | 736.6 | 733.4 | 730.2 | 727.1 | 724.0 | 720.9 | 717.8 | 714.7 | 708.6 | 702.6 | 696.6 | 690.6 | 678.7 | 666.8 |
| **60** | 745.9 | 742.7 | 739.5 | 736.4 | 733.2 | 730.1 | 727.1 | 724.0 | 721.0 | 718.0 | 712.0 | 706.0 | 700.1 | 694.3 | 682.6 | 671.1 |
| **Toluene** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 870.6 | 866.1 | 861.5 | 857.0 | 852.4 | 847.9 | 843.3 | 838.7 | 834.0 | 829.4 | 820.0 | 810.4 | 800.7 | 790.8 |  |  |
| **1** | 871.3 | 866.8 | 862.2 | 857.7 | 853.2 | 848.6 | 844.0 | 839.4 | 834.8 | 830.2 | 820.8 | 811.4 | 801.7 | 791.9 | 771.5 | 749.9 |
| **5** | 874.2 | 869.8 | 865.3 | 860.8 | 856.4 | 851.9 | 847.4 | 842.9 | 838.4 | 833.9 | 824.7 | 815.5 | 806.1 | 796.5 | 776.9 | 756.2 |
| **10** | 877.8 | 873.4 | 869.0 | 864.6 | 860.3 | 855.9 | 851.5 | 847.1 | 842.7 | 838.3 | 829.4 | 820.4 | 811.3 | 802.1 | 783.2 | 763.4 |
| **15** | 881.2 | 876.9 | 872.6 | 868.3 | 864.0 | 859.7 | 855.4 | 851.1 | 846.8 | 842.5 | 833.8 | 825.1 | 816.2 | 807.3 | 789.1 | 770.2 |
| **20** | 884.5 | 880.3 | 876.1 | 871.9 | 867.6 | 863.4 | 859.2 | 855.0 | 850.8 | 846.5 | 838.1 | 829.5 | 821.0 | 812.3 | 794.6 | 776.5 |
| **25** | 887.8 | 883.6 | 879.5 | 875.3 | 871.2 | 867.0 | 862.9 | 858.7 | 854.6 | 850.5 | 842.2 | 833.8 | 825.5 | 817.0 | 799.9 | 782.4 |
| **30** | 891.0 | 886.8 | 882.7 | 878.7 | 874.6 | 870.5 | 866.4 | 862.4 | 858.3 | 854.2 | 846.1 | 838.0 | 829.8 | 821.6 | 805.0 | 788.0 |
| **35** | 894.0 | 890.0 | 885.9 | 881.9 | 877.9 | 873.9 | 869.9 | 865.9 | 861.9 | 857.9 | 849.9 | 842.0 | 834.0 | 825.9 | 809.7 | 793.3 |
| **40** | 897.0 | 893.0 | 889.1 | 885.1 | 881.1 | 877.2 | 873.2 | 869.3 | 865.4 | 861.5 | 853.6 | 845.8 | 838.0 | 830.1 | 814.3 | 798.3 |
| **45** | 900.0 | 896.0 | 892.1 | 888.2 | 884.3 | 880.4 | 876.5 | 872.6 | 868.8 | 864.9 | 857.2 | 849.5 | 841.8 | 834.2 | 818.7 | 803.2 |
| **50** | 902.9 | 898.9 | 895.1 | 891.2 | 887.3 | 883.5 | 879.7 | 875.8 | 872.0 | 868.2 | 860.7 | 853.1 | 845.6 | 838.1 | 823.0 | 807.8 |
| **55** | 905.7 | 901.8 | 897.9 | 894.1 | 890.3 | 886.5 | 882.7 | 879.0 | 875.2 | 871.5 | 864.0 | 856.6 | 849.2 | 841.8 | 827.0 | 812.2 |
| **60** | 908.4 | 904.6 | 900.8 | 897.0 | 893.2 | 889.5 | 885.8 | 882.0 | 878.3 | 874.7 | 867.3 | 860.0 | 852.7 | 845.5 | 831.0 | 816.4 |
| **Dichloromethane** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 1335.3 | 1326.8 | 1318.2 | 1309.5 | 1300.7 | 1291.8 |  |  |  |  |  |  |  |  |  |  |
| **1** | 1336.3 | 1327.9 | 1319.3 | 1310.7 | 1301.9 | 1293.0 | 1284.0 | 1274.9 | 1265.6 | 1256.1 | 1236.6 | 1216.3 | 1194.8 | 1172.1 | 1121.4 | 1059.8 |
| **5** | 1340.9 | 1332.6 | 1324.2 | 1315.7 | 1307.2 | 1298.5 | 1289.7 | 1280.8 | 1271.7 | 1262.6 | 1243.7 | 1224.1 | 1203.5 | 1181.9 | 1134.4 | 1078.5 |
| **10** | 1346.4 | 1338.3 | 1330.1 | 1321.8 | 1313.5 | 1305.0 | 1296.5 | 1287.9 | 1279.1 | 1270.2 | 1252.1 | 1233.2 | 1213.7 | 1193.2 | 1148.9 | 1098.3 |
| **15** | 1351.7 | 1343.8 | 1335.8 | 1327.7 | 1319.5 | 1311.3 | 1303.0 | 1294.6 | 1286.1 | 1277.5 | 1259.9 | 1241.8 | 1223.1 | 1203.6 | 1161.9 | 1115.3 |
| **20** | 1356.9 | 1349.1 | 1341.2 | 1333.3 | 1325.4 | 1317.3 | 1309.2 | 1301.0 | 1292.8 | 1284.4 | 1267.4 | 1250.0 | 1231.9 | 1213.3 | 1173.8 | 1130.3 |
| **25** | 1361.9 | 1354.2 | 1346.5 | 1338.8 | 1331.0 | 1323.1 | 1315.2 | 1307.2 | 1299.2 | 1291.1 | 1274.5 | 1257.6 | 1240.3 | 1222.4 | 1184.7 | 1143.7 |
| **30** | 1366.7 | 1359.2 | 1351.6 | 1344.0 | 1336.4 | 1328.7 | 1321.0 | 1313.2 | 1305.3 | 1297.4 | 1281.3 | 1264.9 | 1248.1 | 1230.9 | 1194.8 | 1156.0 |
| **35** | 1371.4 | 1364.0 | 1356.6 | 1349.1 | 1341.7 | 1334.1 | 1326.5 | 1318.9 | 1311.2 | 1303.5 | 1287.9 | 1271.9 | 1255.6 | 1238.9 | 1204.2 | 1167.2 |
| **40** | 1376.0 | 1368.7 | 1361.4 | 1354.1 | 1346.7 | 1339.4 | 1331.9 | 1324.5 | 1316.9 | 1309.4 | 1294.1 | 1278.6 | 1262.7 | 1246.6 | 1213.1 | 1177.7 |
| **45** | 1380.5 | 1373.3 | 1366.1 | 1358.9 | 1351.7 | 1344.4 | 1337.1 | 1329.8 | 1322.5 | 1315.1 | 1300.1 | 1285.0 | 1269.5 | 1253.9 | 1221.5 | 1187.4 |
| **50** | 1384.8 | 1377.7 | 1370.7 | 1363.6 | 1356.5 | 1349.3 | 1342.2 | 1335.0 | 1327.8 | 1320.5 | 1305.9 | 1291.1 | 1276.1 | 1260.8 | 1229.4 | 1196.6 |
| **55** | 1389.0 | 1382.1 | 1375.1 | 1368.1 | 1361.1 | 1354.1 | 1347.1 | 1340.0 | 1332.9 | 1325.8 | 1311.5 | 1297.0 | 1282.3 | 1267.5 | 1236.9 | 1205.2 |
| **60** | 1393.2 | 1386.3 | 1379.4 | 1372.5 | 1365.7 | 1358.8 | 1351.8 | 1344.9 | 1337.9 | 1331.0 | 1316.9 | 1302.7 | 1288.4 | 1273.8 | 1244.1 | 1213.4 |
| **Ethanol** | | | | | | | | | | | | | | | | |
|  | **288.15** | **293.15** | **298.15** | **303.15** | **308.15** | **313.15** | **318.15** | **323.15** | **328.15** | **333.15** | **343.15** | **353.15** | **363.15** | **373.15** | **393.15** | **413.15** |
| **0.1** | 803.7 | 799.2 | 794.6 | 790.0 | 785.3 | 780.7 | 775.9 | 771.2 | 766.3 | 761.4 | 751.4 |  |  |  |  |  |
| **1** | 804.2 | 799.6 | 795.1 | 790.5 | 785.9 | 781.2 | 776.5 | 771.7 | 766.9 | 762.1 | 752.1 | 741.9 | 731.2 | 720.2 | 696.5 | 669.8 |
| **5** | 806.2 | 801.8 | 797.3 | 792.8 | 788.2 | 783.6 | 779.0 | 774.3 | 769.6 | 764.8 | 755.1 | 745.1 | 734.7 | 724.0 | 701.2 | 675.8 |
| **10** | 808.7 | 804.3 | 799.9 | 795.5 | 791.0 | 786.5 | 782.0 | 777.4 | 772.8 | 768.1 | 758.6 | 748.9 | 738.9 | 728.6 | 706.7 | 682.7 |
| **15** | 811.2 | 806.9 | 802.5 | 798.1 | 793.8 | 789.3 | 784.9 | 780.4 | 775.9 | 771.3 | 762.1 | 752.6 | 742.9 | 732.9 | 711.8 | 689.0 |
| **20** | 813.6 | 809.3 | 805.0 | 800.7 | 796.4 | 792.1 | 787.7 | 783.3 | 778.9 | 774.4 | 765.4 | 756.1 | 746.7 | 737.0 | 716.7 | 694.9 |
| **25** | 815.9 | 811.7 | 807.5 | 803.3 | 799.0 | 794.7 | 790.4 | 786.1 | 781.8 | 777.4 | 768.5 | 759.5 | 750.3 | 740.9 | 721.2 | 700.3 |
| **30** | 818.2 | 814.0 | 809.9 | 805.7 | 801.5 | 797.3 | 793.1 | 788.9 | 784.6 | 780.3 | 771.6 | 762.8 | 753.8 | 744.6 | 725.6 | 705.4 |
| **35** | 820.4 | 816.3 | 812.2 | 808.1 | 804.0 | 799.8 | 795.7 | 791.5 | 787.3 | 783.1 | 774.6 | 765.9 | 757.1 | 748.2 | 729.7 | 710.2 |
| **40** | 822.6 | 818.5 | 814.5 | 810.4 | 806.4 | 802.3 | 798.2 | 794.1 | 790.0 | 785.8 | 777.5 | 769.0 | 760.4 | 751.6 | 733.6 | 714.8 |
| **45** | 824.7 | 820.7 | 816.7 | 812.7 | 808.7 | 804.7 | 800.7 | 796.6 | 792.5 | 788.5 | 780.2 | 771.9 | 763.5 | 755.0 | 737.4 | 719.1 |
| **50** | 826.8 | 822.8 | 818.9 | 814.9 | 811.0 | 807.0 | 803.0 | 799.1 | 795.1 | 791.0 | 783.0 | 774.8 | 766.5 | 758.2 | 741.0 | 723.2 |
| **55** | 828.8 | 824.9 | 821.0 | 817.1 | 813.2 | 809.3 | 805.4 | 801.4 | 797.5 | 793.5 | 785.6 | 777.6 | 769.5 | 761.3 | 744.5 | 727.1 |
| **60** | 830.8 | 827.0 | 823.1 | 819.3 | 815.4 | 811.5 | 807.7 | 803.8 | 799.9 | 796.0 | 788.2 | 780.3 | 772.3 | 764.2 | 747.8 | 730.9 |

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