# Heptanoic acid, methyl ester

| | |
|---|---|
| **Other names:** | Methyl enanthate |
| | Methyl ester of heptanoic acid |
| | Methyl heptanoate |
| | Methyl heptoate |
| | Methyl n-heptanoate |
| | Methyl n-heptylate |
| | Methyl oenanthylate |
| | enanthic acid, methyl ester |
| | methyl oenanthate |
| | oenanthic acid, methyl ester |
| **Inchi:** | InChI=1S/C8H16O2/c1-3-4-5-6-7-8(9)10-2/h3-7H2,1-2H3 |
| **InchiKey:** | XNCNNDVCAUWAIT-UHFFFAOYSA-N |
| **Formula:** | C8H16O2 |
| **SMILES:** | CCCCCCC(=O)OC |
| **Mol. weight [g/mol]:** | 144.21 |
| **CAS:** | 106-73-0 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chl | -4867.40 ± 0.80 | kJ/mol | NIST Webbook |
| gf | -217.44 | kJ/mol | Joback Method |
| hf | -517.00 ± 2.00 | kJ/mol | NIST Webbook |
| hfl | -567.10 ± 0.92 | kJ/mol | NIST Webbook |
| hfus | 19.26 | kJ/mol | Joback Method |
| hvap | 53.10 ± 0.10 | kJ/mol | NIST Webbook |
| hvap | 49.70 ± 0.50 | kJ/mol | NIST Webbook |
| hvap | 53.10 ± 0.40 | kJ/mol | NIST Webbook |
| hvap | 53.50 | kJ/mol | NIST Webbook |
| hvap | 51.62 ± 0.48 | kJ/mol | NIST Webbook |
| hvap | 51.60 ± 0.50 | kJ/mol | NIST Webbook |
| hvap | 50.00 ± 1.00 | kJ/mol | NIST Webbook |
| hvap | 50.10 | kJ/mol | NIST Webbook |
| hvap | 53.70 | kJ/mol | NIST Webbook |
| hvap | 53.40 | kJ/mol | NIST Webbook |
| hvap | 51.80 ± 0.10 | kJ/mol | NIST Webbook |
| hvap | 53.20 ± 0.20 | kJ/mol | NIST Webbook |
| log10ws | -2.03 | | Crippen Method |

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|---|---|---|---|
| logp | 2.130 | | Crippen Method |
| mcvol | 131.020 | ml/mol | McGowan Method |
| pc | 2657.03 | kPa | Joback Method |
| rinpol | 1025.00 | | NIST Webbook |
| rinpol | 164.60 | | NIST Webbook |
| rinpol | 164.60 | | NIST Webbook |
| rinpol | 1008.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1005.00 | | NIST Webbook |
| rinpol | 1014.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1021.00 | | NIST Webbook |
| rinpol | 1025.00 | | NIST Webbook |
| rinpol | 1005.00 | | NIST Webbook |
| rinpol | 1025.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1010.00 | | NIST Webbook |
| rinpol | 1005.00 | | NIST Webbook |
| rinpol | 1009.00 | | NIST Webbook |
| rinpol | 1005.00 | | NIST Webbook |
| rinpol | 1013.00 | | NIST Webbook |
| rinpol | 1008.00 | | NIST Webbook |
| rinpol | 1009.00 | | NIST Webbook |
| rinpol | 1023.90 | | NIST Webbook |
| rinpol | 1026.00 | | NIST Webbook |
| rinpol | 1002.00 | | NIST Webbook |
| rinpol | 1023.90 | | NIST Webbook |
| rinpol | 1023.30 | | NIST Webbook |
| rinpol | 1022.90 | | NIST Webbook |
| rinpol | 1021.00 | | NIST Webbook |
| rinpol | 1012.00 | | NIST Webbook |
| rinpol | 1002.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1011.00 | | NIST Webbook |
| rinpol | 1007.00 | | NIST Webbook |
| rinpol | 1026.00 | | NIST Webbook |
| rinpol | 1008.60 | | NIST Webbook |
| rinpol | 1008.10 | | NIST Webbook |
| rinpol | 1008.00 | | NIST Webbook |
| rinpol | 1027.70 | | NIST Webbook |

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|---|---|---|---|
| rinpol | 1028.40 | | NIST Webbook |
| rinpol | 1013.00 | | NIST Webbook |
| rinpol | 1005.00 | | NIST Webbook |
| rinpol | 1004.00 | | NIST Webbook |
| rinpol | 1007.00 | | NIST Webbook |
| rinpol | 1007.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| rinpol | 1006.00 | | NIST Webbook |
| ripol | 1327.00 | | NIST Webbook |
| ripol | 1288.00 | | NIST Webbook |
| ripol | 1296.00 | | NIST Webbook |
| ripol | 1282.00 | | NIST Webbook |
| ripol | 1281.00 | | NIST Webbook |
| ripol | 1302.00 | | NIST Webbook |
| ripol | 1273.00 | | NIST Webbook |
| ripol | 1276.00 | | NIST Webbook |
| ripol | 1296.00 | | NIST Webbook |
| ripol | 1279.00 | | NIST Webbook |
| ripol | 1279.00 | | NIST Webbook |
| ripol | 1273.00 | | NIST Webbook |
| ripol | 1279.00 | | NIST Webbook |
| ripol | 1273.00 | | NIST Webbook |
| ripol | 1284.00 | | NIST Webbook |
| ripol | 1296.00 | | NIST Webbook |
| ripol | 1288.00 | | NIST Webbook |
| ripol | 1282.00 | | NIST Webbook |
| ripol | 1241.00 | | NIST Webbook |
| ripol | 1299.00 | | NIST Webbook |
| ripol | 1292.00 | | NIST Webbook |
| ripol | 1301.00 | | NIST Webbook |
| ripol | 1291.00 | | NIST Webbook |
| ripol | 1281.00 | | NIST Webbook |
| ripol | 1291.00 | | NIST Webbook |
| ripol | 1291.00 | | NIST Webbook |
| tb | 445.20 | K | NIST Webbook |
| tb | 446.95 ± 0.30 | K | NIST Webbook |
| tb | 445.30 ± 2.00 | K | NIST Webbook |
| tc | 633.80 | K | Joback Method |
| tf | 217.40 ± 0.50 | K | NIST Webbook |
| tf | 217.40 ± 0.05 | K | NIST Webbook |
| vc | 0.507 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 326.10 | J/mol×K | 575.44 | Joback Method |
| cpg | 336.64 | J/mol×K | 604.62 | Joback Method |
| cpg | 291.94 | J/mol×K | 487.91 | Joback Method |
| cpg | 279.70 | J/mol×K | 458.73 | Joback Method |
| cpg | 346.77 | J/mol×K | 633.80 | Joback Method |
| cpg | 303.75 | J/mol×K | 517.09 | Joback Method |
| cpg | 315.14 | J/mol×K | 546.26 | Joback Method |
| cpl | 312.80 | J/mol×K | 363.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 289.20 | J/mol×K | 303.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 292.50 | J/mol×K | 313.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 296.20 | J/mol×K | 323.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 285.10 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 300.10 | J/mol×K | 333.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 304.30 | J/mol×K | 343.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |
| cpl | 308.60 | J/mol×K | 353.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters |

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|---|---|---|---|---|---|
| cpl | 316.90 | J/mol×K | 373.15 | Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters | |
| dvisc | 0.0010230 | Pa×s | 298.15 | A Study on Properties Derived from Densities and Viscosities for the Ternary Systems (Methyl Pentanoate or Methyl Heptanoate) + n-Octane + 1-Hexanol and their Binary Subsystems at Various Temperatures. | |
| dvisc | 0.0008230 | Pa×s | 313.15 | A Study on Properties Derived from Densities and Viscosities for the Ternary Systems (Methyl Pentanoate or Methyl Heptanoate) + n-Octane + 1-Hexanol and their Binary Subsystems at Various Temperatures. | |
| dvisc | 0.0009500 | Pa×s | 303.15 | A Study on Properties Derived from Densities and Viscosities for the Ternary Systems (Methyl Pentanoate or Methyl Heptanoate) + n-Octane + 1-Hexanol and their Binary Subsystems at Various Temperatures. | |

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|---|---|---|---|---|
| dvisc | 0.0013200 | Pa×s | 283.15 | A Study on Properties Derived from Densities and Viscosities for the Ternary Systems (Methyl Pentanoate or Methyl Heptanoate) + n-Octane + 1-Hexanol and their Binary Subsystems at Various Temperatures. |
| dvisc | 0.0011120 | Pa×s | 293.15 | A Study on Properties Derived from Densities and Viscosities for the Ternary Systems (Methyl Pentanoate or Methyl Heptanoate) + n-Octane + 1-Hexanol and their Binary Subsystems at Various Temperatures. |
| hvapt | 50.20 ± 0.10 | kJ/mol | 326.00 | NIST Webbook |
| hvapt | 49.00 | kJ/mol | 367.00 | NIST Webbook |
| hvapt | 49.10 | kJ/mol | 350.00 | NIST Webbook |
| hvapt | 46.30 | kJ/mol | 432.50 | NIST Webbook |
| pvap | 0.12 | kPa | 293.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.14 | kPa | 296.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.47 | kPa | 313.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |

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|---|---|---|---|---|
| pvap | 0.38 | kPa | 310.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.33 | kPa | 308.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.28 | kPa | 306.10 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.23 | kPa | 303.10 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.19 | kPa | 300.30 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.09 | kPa | 290.30 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.08 | kPa | 288.30 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.07 | kPa | 286.40 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.05 | kPa | 283.50 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |

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|---|---|---|---|---|
| pvap | 0.16 | kPa | 298.20 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| pvap | 0.03 | kPa | 278.10 | Transpiration method: Vapor pressures and enthalpies of vaporization of some low-boiling esters |
| rfi | 1.38724 | | 348.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40945 | | 298.15 | Densities, speeds of sound, and refractive indices of the ternary mixtures (toluene + methyl acetate + butyl acetate) and (toluene + methyl acetate + methyl heptanoate) at 298.15 K |
| rfi | 1.40945 | | 298.15 | Isobaric Vapor-Liquid Equilibria for the Binary Systems Benzene + Methyl Ethanoate, Benzene + Butyl Ethanoate, and Benzene + Methyl Heptanoate at 101.31kPa |
| rfi | 1.38276 | | 358.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.38501 | | 353.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.38946 | | 343.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.39167 | | 338.15 | Thermophysical properties of fatty acid methyl and ethyl esters |

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|---|---|---|---|---|
| rfi | 1.39389 | | 333.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.39614 | | 328.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.39841 | | 323.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40070 | | 318.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40530 | | 308.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40753 | | 303.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40976 | | 298.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.41199 | | 293.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.41421 | | 288.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.41643 | | 283.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.41865 | | 278.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rfi | 1.40301 | | 313.15 | Thermophysical properties of fatty acid methyl and ethyl esters |
| rhol | 875.61 | kg/m3 | 298.15 | Densities and interfacial tensions for fatty acid methyl esters (from methyl formate to methyl heptanoate) + water demixed mixtures at atmospheric pressure conditions |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.51732e+01 |
| Coeff. B | -4.00813e+03 |
| Coeff. C | -6.54580e+01 |
| Temperature range (K), min. | 334.72 |
| Temperature range (K), max. | 471.89 |

# Datasets

## Mass density, kg/m3

| Temperature, K - Liquid | Pressure, kPa - Liquid | Mass density, kg/m3 - Liquid |
|---|---|---|
| 293.15 | 100.00 | 880.16 |
| 293.15 | 1000.00 | 880.29 |
| 293.15 | 3000.00 | 881.98 |
| 293.15 | 5000.00 | 883.19 |
| 293.15 | 10000.00 | 886.99 |
| 293.15 | 15000.00 | 890.49 |
| 293.15 | 20000.00 | 893.86 |
| 293.15 | 25000.00 | 897.18 |
| 293.15 | 30000.00 | 900.36 |
| 293.15 | 35000.00 | 903.34 |
| 293.15 | 40000.00 | 906.22 |
| 293.15 | 50000.00 | 912.14 |
| 293.15 | 60000.00 | 917.16 |
| 303.15 | 100.00 | 870.66 |
| 303.15 | 1000.00 | 871.46 |
| 303.15 | 3000.00 | 873.07 |
| 303.15 | 5000.00 | 874.66 |
| 303.15 | 10000.00 | 878.5 |
| 303.15 | 15000.00 | 882.18 |

| | | |
|---|---|---|
| 303.15 | 20000.00 | 885.64 |
| 303.15 | 25000.00 | 889.08 |
| 303.15 | 30000.00 | 892.3 |
| 303.15 | 35000.00 | 895.46 |
| 303.15 | 40000.00 | 898.49 |
| 303.15 | 50000.00 | 904.43 |
| 303.15 | 60000.00 | 909.95 |
| 313.15 | 100.00 | 861.82 |
| 313.15 | 1000.00 | 862.16 |
| 313.15 | 3000.00 | 863.9 |
| 313.15 | 5000.00 | 865.62 |
| 313.15 | 10000.00 | 869.71 |
| 313.15 | 15000.00 | 873.55 |
| 313.15 | 20000.00 | 877.29 |
| 313.15 | 25000.00 | 880.89 |
| 313.15 | 30000.00 | 884.32 |
| 313.15 | 35000.00 | 887.66 |
| 313.15 | 40000.00 | 890.73 |
| 313.15 | 50000.00 | 896.98 |
| 313.15 | 60000.00 | 902.59 |
| 323.15 | 100.00 | 852.25 |
| 323.15 | 1000.00 | 853.12 |
| 323.15 | 3000.00 | 854.89 |
| 323.15 | 5000.00 | 856.64 |
| 323.15 | 10000.00 | 860.97 |
| 323.15 | 15000.00 | 865.07 |
| 323.15 | 20000.00 | 869.08 |
| 323.15 | 25000.00 | 872.69 |
| 323.15 | 30000.00 | 876.31 |
| 323.15 | 35000.00 | 879.74 |
| 323.15 | 40000.00 | 883.15 |
| 323.15 | 50000.00 | 889.53 |
| 323.15 | 60000.00 | 895.63 |
| 333.15 | 100.00 | 843.03 |
| 333.15 | 1000.00 | 843.81 |
| 333.15 | 3000.00 | 845.84 |
| 333.15 | 5000.00 | 847.68 |
| 333.15 | 10000.00 | 852.16 |
| 333.15 | 15000.00 | 856.43 |
| 333.15 | 20000.00 | 860.63 |
| 333.15 | 25000.00 | 864.64 |
| 333.15 | 30000.00 | 868.31 |
| 333.15 | 35000.00 | 871.91 |
| 333.15 | 40000.00 | 875.61 |

| | | |
|---|---|---|
| 333.15 | 50000.00 | 882.2 |
| 333.15 | 60000.00 | 888.39 |
| 343.15 | 100.00 | 833.48 |
| 343.15 | 1000.00 | 834.64 |
| 343.15 | 3000.00 | 836.7 |
| 343.15 | 5000.00 | 838.79 |
| 343.15 | 10000.00 | 843.47 |
| 343.15 | 15000.00 | 848.02 |
| 343.15 | 20000.00 | 852.59 |
| 343.15 | 25000.00 | 856.55 |
| 343.15 | 30000.00 | 860.57 |
| 343.15 | 35000.00 | 864.43 |
| 343.15 | 40000.00 | 867.96 |
| 343.15 | 50000.00 | 875.0 |
| 343.15 | 60000.00 | 881.19 |
| 353.15 | 100.00 | 824.35 |
| 353.15 | 1000.00 | 825.27 |
| 353.15 | 3000.00 | 827.61 |
| 353.15 | 5000.00 | 829.66 |
| 353.15 | 10000.00 | 834.76 |
| 353.15 | 15000.00 | 839.63 |
| 353.15 | 20000.00 | 844.11 |
| 353.15 | 25000.00 | 848.48 |
| 353.15 | 30000.00 | 852.65 |
| 353.15 | 35000.00 | 856.65 |
| 353.15 | 40000.00 | 860.37 |
| 353.15 | 50000.00 | 867.57 |
| 353.15 | 60000.00 | 874.32 |
| 363.15 | 100.00 | 815.19 |
| 363.15 | 1000.00 | 816.36 |
| 363.15 | 3000.00 | 818.75 |
| 363.15 | 5000.00 | 821.0 |
| 363.15 | 10000.00 | 826.14 |
| 363.15 | 15000.00 | 831.57 |
| 363.15 | 20000.00 | 836.11 |
| 363.15 | 25000.00 | 840.56 |
| 363.15 | 30000.00 | 845.01 |
| 363.15 | 35000.00 | 849.23 |
| 363.15 | 40000.00 | 853.33 |
| 363.15 | 50000.00 | 860.82 |
| 363.15 | 60000.00 | 867.91 |

Reference *https://www.doi.org/10.1016/j.fluid.2018.04.024*

# Viscosity, Pa*s

| Temperature, K - Liquid | Pressure, kPa - Liquid | Viscosity, Pa*s - Liquid |
|---|---|---|
| 294.20 | 107.00 | 0.0011100 |
| 294.13 | 4967.00 | 0.0011700 |
| 293.85 | 9970.00 | 0.0012200 |
| 293.58 | 14994.00 | 0.0012800 |
| 292.87 | 19994.00 | 0.0013500 |
| 292.56 | 25040.00 | 0.0014200 |
| 292.04 | 30028.00 | 0.0015000 |
| 303.15 | 102.00 | 0.0009500 |
| 303.12 | 5011.00 | 0.0010000 |
| 303.08 | 10026.00 | 0.0010500 |
| 303.05 | 14993.00 | 0.0011000 |
| 303.02 | 19985.00 | 0.0011500 |
| 302.93 | 25017.00 | 0.0012000 |
| 302.83 | 29961.00 | 0.0012400 |
| 312.77 | 103.00 | 0.0008300 |
| 312.78 | 5010.00 | 0.0008800 |
| 312.65 | 10009.00 | 0.0009200 |
| 312.66 | 15001.00 | 0.0009700 |
| 312.62 | 20047.00 | 0.0010100 |
| 312.57 | 25001.00 | 0.0010500 |
| 312.49 | 29986.00 | 0.0010900 |
| 322.33 | 96.00 | 0.0007300 |
| 322.26 | 5004.00 | 0.0007700 |
| 322.23 | 10018.00 | 0.0008100 |
| 322.21 | 15004.00 | 0.0008500 |
| 322.17 | 19955.00 | 0.0008900 |
| 322.23 | 25027.00 | 0.0009300 |
| 322.09 | 29925.00 | 0.0009700 |
| 331.85 | 99.00 | 0.0006500 |
| 331.78 | 5007.00 | 0.0006900 |
| 331.78 | 9972.00 | 0.0007200 |
| 331.74 | 15035.00 | 0.0007600 |
| 331.67 | 19865.00 | 0.0008000 |
| 331.68 | 25041.00 | 0.0008300 |
| 331.56 | 30001.00 | 0.0008700 |
| 341.67 | 96.00 | 0.0005800 |
| 341.72 | 5062.00 | 0.0006200 |
| 341.68 | 10141.00 | 0.0006500 |
| 341.48 | 14961.00 | 0.0006900 |

| | | |
|---|---|---|
| 341.81 | 20048.00 | 0.0007200 |
| 341.80 | 25032.00 | 0.0007500 |
| 341.73 | 29980.00 | 0.0007800 |
| 351.27 | 10077.00 | 0.0005800 |
| 351.26 | 14966.00 | 0.0006100 |
| 351.31 | 19977.00 | 0.0006400 |
| 351.49 | 24997.00 | 0.0006700 |
| 351.46 | 30010.00 | 0.0007000 |
| 361.37 | 20002.00 | 0.0005800 |
| 361.47 | 25022.00 | 0.0006100 |
| 361.24 | 29993.00 | 0.0006400 |

Reference *https://www.doi.org/10.1016/j.jct.2019.02.026*

# Sources


**Liquid viscosities for methyl hexanoate, methyl heptanoate, methyl caprylate, and methyl nonanoate at high pressures:** https://www.doi.org/10.1016/j.jct.2019.02.026

**Thermodynamic Properties of Mixtures Containing Ionic Liquids. 8. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in Trihexyl(tetradecyl)phosphonium Tris(pentafluoroethyl)trifluorophosphate:** https://www.doi.org/10.1021/je0503554

**Thermophysical properties of fatty acid methyl and ethyl esters:** https://www.doi.org/10.1016/j.jct.2019.02.025

**Heat capacities and thermal diffusivities of some n-alkanoic acid methyl esters:** https://www.doi.org/10.1016/j.jct.2018.09.024

**Isobaric Vapor-Liquid Equilibria for the Binary Systems Benzene + Methyl Ethanoate, Benzene + Butyl Ethanoate, Benzene + Methyl Heptanoate at 101.33 kPa:** https://www.doi.org/10.1021/je800915d

**Using gas–liquid chromatography, acid methyl esters: Measurement and correlation with the PC-SAFT equation of state:** https://www.doi.org/10.1016/j.fluid.2018.04.024

**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772

**Densities, speeds of sound, and refractive indices of the ternary mixtures (toluene + methyl acetate + methyl heptanoate) and (toluene + methyl acetate + methyl nonanoate) at 298.15 K:** https://www.doi.org/10.1016/j.jct.2006.07.013

**Experimental Study of Thermodynamic Properties of Mixtures Containing Ionic Liquid + Ethyl Acetate or Methyl Heptanoate:** https://www.doi.org/10.1016/j.jct.2018.07.010

**Densities and interfacial tensions for fatty acid methyl esters (from methyl hexanoate to methyl heptadecanoate) + water + hexadecane mixtures at atmospheric pressure conditions:** https://www.chemeo.com/doc/models/crippen_log10ws

**Thermodynamic Properties of Mixtures Containing Ionic Liquids. 9. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in Trihexyl(tetradecyl)phosphonium Tris(pentafluoroethyl)trifluorophosphate:** https://www.doi.org/10.1021/je0602723

**Below the room temperature measurements of solubilities in ester functionalized ionic liquids:** https://www.doi.org/10.1016/j.jct.2018.02.010

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**Joback Method:** https://en.wikipedia.org/wiki/Joback_method

# Legend

| | |
|---|---|
| **chl:** | Standard liquid enthalpy of combustion |
| **cpg:** | Ideal gas heat capacity |
| **cpl:** | Liquid phase heat capacity |
| **dvisc:** | Dynamic viscosity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfl:** | Liquid phase enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **hvapt:** | Enthalpy of vaporization at a given temperature |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **pvap:** | Vapor pressure |
| **rfi:** | Refractive Index |
| **rhol:** | Liquid Density |
| **rinpol:** | Non-polar retention indices |
| **ripol:** | Polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |