# Pentane, 2,2,4-trimethyl-

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|---|---|
| **Other names:** | (CH3)2CHCH2C(CH3)3 |
| | 2,2,4-Trimethylpentane |
| | ISOBUTYLTRIMETHYLMETHANE |
| | ISOOCTANE |
| | Isobutyltrimethylethane |
| | UN 1262 |
| **Inchi:** | InChI=1S/C8H18/c1-7(2)6-8(3,4)5/h7H,6H2,1-5H3 |
| **InchiKey:** | NHTMVDHEPJAVLT-UHFFFAOYSA-N |
| **Formula:** | C8H18 |
| **SMILES:** | CC(C)CC(C)(C)C |
| **Mol. weight [g/mol]:** | 114.23 |
| **CAS:** | 540-84-1 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.3030 | | KDB |
| ap | 352.650 | K | KDB |
| chl | -5461.30 ± 1.30 | kJ/mol | NIST Webbook |
| gf | 13.69 | kJ/mol | KDB |
| gyrad | 4.1710 | | KDB |
| hcg | 5461.33 | kJ/mol | KDB |
| hcn | 5065.192 | kJ/mol | KDB |
| hf | -224.10 ± 1.30 | kJ/mol | NIST Webbook |
| hf | -224.30 | kJ/mol | KDB |
| hfl | -259.30 ± 1.30 | kJ/mol | NIST Webbook |
| hfus | 5.54 | kJ/mol | Joback Method |
| hvap | 34.90 | kJ/mol | NIST Webbook |
| hvap | 35.10 ± 0.10 | kJ/mol | NIST Webbook |
| hvap | 35.10 ± 0.10 | kJ/mol | NIST Webbook |
| hvap | 35.20 ± 0.10 | kJ/mol | NIST Webbook |
| hvap | 35.24 | kJ/mol | NIST Webbook |
| hvap | 35.10 | kJ/mol | NIST Webbook |
| hvap | 35.12 | kJ/mol | NIST Webbook |
| ie | 9.86 | eV | NIST Webbook |
| ie | 9.91 | eV | NIST Webbook |
| ie | 9.89 ± 0.03 | eV | NIST Webbook |

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|---|---|---|---|
| log10ws | -4.74 | | Estimated Solubility Method |
| log10ws | -4.74 | | Aqueous Solubility Prediction Method |
| logp | 3.079 | | Crippen Method |
| mcvol | 123.580 | ml/mol | McGowan Method |
| nfpaf | %!d(float64=3) | | KDB |
| pc | 2564.33 ± 10.13 | kPa | NIST Webbook |
| pc | 2567.60 ± 40.53 | kPa | NIST Webbook |
| pc | 2583.79 ± 15.19 | kPa | NIST Webbook |
| pc | 2570.00 ± 20.00 | kPa | NIST Webbook |
| pc | 2570.00 | kPa | Critical Temperatures and Pressures of Several Binary and Ternary Mixtures Concerning the Alkylation of 2-Methylpropane with 1-Butene in the Presence of Methane or Carbon Dioxide |
| pc | 2570.00 | kPa | KDB |
| rhoc | 244.45 ± 2.28 | kg/m3 | NIST Webbook |
| rhoc | 243.31 ± 4.57 | kg/m3 | NIST Webbook |
| rhoc | 243.31 ± 3.43 | kg/m3 | NIST Webbook |
| rinpol | 686.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 685.00 | | NIST Webbook |
| rinpol | 686.00 | | NIST Webbook |
| rinpol | 685.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| rinpol | 691.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 691.00 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 694.00 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 684.38 | | NIST Webbook |
| rinpol | 691.00 | | NIST Webbook |
| rinpol | 691.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 693.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |

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|---|---|---|
| rinpol | 695.00 | NIST Webbook |
| rinpol | 690.00 | NIST Webbook |
| rinpol | 700.00 | NIST Webbook |
| rinpol | 700.00 | NIST Webbook |
| rinpol | 687.00 | NIST Webbook |
| rinpol | 686.00 | NIST Webbook |
| rinpol | 692.70 | NIST Webbook |
| rinpol | 690.20 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 694.10 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 688.00 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 690.00 | NIST Webbook |
| rinpol | 695.00 | NIST Webbook |
| rinpol | 692.00 | NIST Webbook |
| rinpol | 689.60 | NIST Webbook |
| rinpol | 684.80 | NIST Webbook |
| rinpol | 689.00 | NIST Webbook |
| rinpol | 688.00 | NIST Webbook |
| rinpol | 688.44 | NIST Webbook |
| rinpol | 692.70 | NIST Webbook |
| rinpol | 689.10 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 691.10 | NIST Webbook |
| rinpol | 689.90 | NIST Webbook |
| rinpol | 690.20 | NIST Webbook |
| rinpol | 690.60 | NIST Webbook |
| rinpol | 693.00 | NIST Webbook |
| rinpol | 700.00 | NIST Webbook |
| rinpol | 694.90 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 693.50 | NIST Webbook |
| rinpol | 697.70 | NIST Webbook |
| rinpol | 703.10 | NIST Webbook |
| rinpol | 687.00 | NIST Webbook |
| rinpol | 694.10 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 689.00 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 689.90 | NIST Webbook |
| rinpol | 692.20 | NIST Webbook |

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| rinpol | 693.00 | NIST Webbook |
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| rinpol | 695.00 | NIST Webbook |
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| rinpol | 690.00 | NIST Webbook |
| rinpol | 691.00 | NIST Webbook |
| rinpol | 692.00 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 686.60 | NIST Webbook |
| rinpol | 687.50 | NIST Webbook |
| rinpol | 688.60 | NIST Webbook |
| rinpol | 689.60 | NIST Webbook |
| rinpol | 690.70 | NIST Webbook |
| rinpol | 691.90 | NIST Webbook |
| rinpol | 691.40 | NIST Webbook |
| rinpol | 691.30 | NIST Webbook |
| rinpol | 689.00 | NIST Webbook |
| rinpol | 690.00 | NIST Webbook |
| rinpol | 690.00 | NIST Webbook |
| rinpol | 696.00 | NIST Webbook |
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| rinpol | 690.00 | NIST Webbook |
| rinpol | 692.00 | NIST Webbook |
| rinpol | 684.00 | NIST Webbook |
| rinpol | 686.00 | NIST Webbook |
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| rinpol | 687.00 | NIST Webbook |
| rinpol | 688.00 | NIST Webbook |
| rinpol | 690.30 | NIST Webbook |
| rinpol | 695.00 | NIST Webbook |
| rinpol | 699.00 | NIST Webbook |
| rinpol | 687.00 | NIST Webbook |
| rinpol | 694.00 | NIST Webbook |
| rinpol | 689.00 | NIST Webbook |

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| rinpol | 689.00 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 694.00 | | NIST Webbook |
| rinpol | 684.80 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 696.00 | | NIST Webbook |
| rinpol | 687.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 692.00 | | NIST Webbook |
| rinpol | 691.00 | | NIST Webbook |
| rinpol | 693.00 | | NIST Webbook |
| rinpol | 694.00 | | NIST Webbook |
| rinpol | 687.00 | | NIST Webbook |
| rinpol | 694.00 | | NIST Webbook |
| rinpol | 690.00 | | NIST Webbook |
| rinpol | 680.00 | | NIST Webbook |
| rinpol | 686.00 | | NIST Webbook |
| rinpol | 685.00 | | NIST Webbook |
| rinpol | 688.44 | | NIST Webbook |
| rinpol | 689.00 | | NIST Webbook |
| rinpol | 687.00 | | NIST Webbook |
| rinpol | 687.50 | | NIST Webbook |
| rinpol | 683.91 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| rinpol | 687.00 | | NIST Webbook |
| rinpol | 686.00 | | NIST Webbook |
| rinpol | 688.00 | | NIST Webbook |
| ripol | 676.00 | | NIST Webbook |
| ripol | 711.00 | | NIST Webbook |
| ripol | 705.00 | | NIST Webbook |
| ripol | 711.00 | | NIST Webbook |
| ripol | 698.00 | | NIST Webbook |
| sl | 314.60 | J/mol×K | NIST Webbook |
| sl | 328.03 | J/mol×K | NIST Webbook |
| tb | 372.26 | K | Low-Pressure VLE Measurements and Thermodynamic Modeling, with PSRK and NRTL, of Binary 1-Alcohol + n-Alkane Systems |

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|---|---|---|---|
| tb | 372.40 ± 0.40 | K | NIST Webbook |
| tb | 372.38 ± 0.10 | K | NIST Webbook |
| tb | 372.38 ± 0.10 | K | NIST Webbook |
| tb | 372.25 ± 0.20 | K | NIST Webbook |
| tb | 372.25 ± 0.50 | K | NIST Webbook |
| tb | 372.38 ± 0.03 | K | NIST Webbook |
| tb | 372.55 ± 0.30 | K | NIST Webbook |
| tb | 372.39 ± 0.20 | K | NIST Webbook |
| tb | 372.38 ± 0.05 | K | NIST Webbook |
| tb | 372.39 ± 0.05 | K | NIST Webbook |
| tb | 372.55 ± 0.20 | K | NIST Webbook |
| tb | 372.50 ± 0.20 | K | NIST Webbook |
| tb | 372.39 ± 0.07 | K | NIST Webbook |
| tb | 372.45 ± 0.50 | K | NIST Webbook |
| tb | 372.38 ± 0.10 | K | NIST Webbook |
| tb | 372.39 ± 0.25 | K | NIST Webbook |
| tb | 372.38 ± 0.01 | K | NIST Webbook |
| tb | 372.38 ± 0.10 | K | NIST Webbook |
| tb | 372.45 ± 0.50 | K | NIST Webbook |
| tb | 372.38 ± 0.15 | K | NIST Webbook |
| tb | 372.38 ± 0.20 | K | NIST Webbook |
| tb | 372.38 ± 0.27 | K | NIST Webbook |
| tb | 372.50 ± 0.40 | K | NIST Webbook |
| tb | 372.45 ± 0.30 | K | NIST Webbook |
| tb | 372.35 ± 0.40 | K | NIST Webbook |
| tb | 372.15 ± 2.00 | K | NIST Webbook |
| tb | 372.65 ± 2.00 | K | NIST Webbook |
| tb | 372.40 | K | NIST Webbook |
| tb | 372.38 ± 0.05 | K | NIST Webbook |
| tb | 372.37 ± 0.20 | K | NIST Webbook |
| tb | 372.40 ± 0.60 | K | NIST Webbook |
| tb | 372.30 ± 0.20 | K | NIST Webbook |
| tb | 372.25 ± 0.20 | K | NIST Webbook |
| tb | 371.45 ± 0.60 | K | NIST Webbook |
| tb | 372.39 ± 0.20 | K | NIST Webbook |
| tb | 372.35 ± 0.30 | K | NIST Webbook |
| tb | 372.30 ± 0.50 | K | NIST Webbook |
| tb | 372.15 ± 0.50 | K | NIST Webbook |
| tb | 372.30 ± 0.30 | K | NIST Webbook |
| tb | 372.00 ± 0.15 | K | NIST Webbook |
| tb | 389.00 ± 2.00 | K | NIST Webbook |
| tb | 372.65 ± 2.00 | K | NIST Webbook |
| tb | 372.35 ± 0.50 | K | NIST Webbook |
| tb | 372.45 ± 0.40 | K | NIST Webbook |

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|---|---|---|---|
| tb | 372.45 ± 0.50 | K | NIST Webbook |
| tb | 372.33 | K | Vapor liquid equilibria for binary and ternary mixtures of diisopropyl ether, ethanol, and 2,2,4-trimethylpentane at 101.3 kPa |
| tb | 372.37 | K | KDB |
| tb | 372.35 | K | Vapor-Liquid Equilibrium of Ferrocene in Some Organic Solvents Using Spectroscopic Methods |
| tb | 372.40 ± 0.20 | K | NIST Webbook |
| tb | 372.40 ± 0.20 | K | NIST Webbook |
| tb | 372.40 | K | NIST Webbook |
| tb | 372.50 ± 0.25 | K | NIST Webbook |
| tb | 372.40 ± 0.15 | K | NIST Webbook |
| tb | 372.39 ± 0.10 | K | NIST Webbook |
| tb | 372.15 ± 0.40 | K | NIST Webbook |
| tb | 372.33 | K | Measurements and correlation of vapour liquid equilibria of 2-butanone and hydrocarbons binary systems at two different pressures |
| tc | 543.80 ± 0.30 | K | NIST Webbook |
| tc | 543.90 | K | NIST Webbook |
| tc | 543.89 ± 0.40 | K | NIST Webbook |
| tc | 543.61 ± 0.20 | K | NIST Webbook |
| tc | 543.82 ± 0.10 | K | NIST Webbook |
| tc | 544.30 ± 0.20 | K | NIST Webbook |
| tc | 544.00 | K | The Critical Temperatures of a Number of (i) (Chloroalkane (C3 C4) + Hydrocarbon (C6 C7)) Binary Mixtures and (ii) (Aromatic Halocarbon (Chlorobenzene, Fluorobenzene, 1,2-Dichlorobenzene, or 1,3-Dichlorobenzene) + Alkane (C8)) Binary Mixtures |
| tc | 543.80 | K | KDB |
| tf | 165.73 ± 0.15 | K | NIST Webbook |
| tf | 165.35 ± 0.50 | K | NIST Webbook |
| tf | 165.45 ± 0.40 | K | NIST Webbook |
| tf | 165.65 ± 0.50 | K | NIST Webbook |
| tf | 165.00 ± 2.00 | K | NIST Webbook |
| tf | 165.80 | K | KDB |
| tf | 165.75 ± 0.02 | K | NIST Webbook |
| tf | 166.15 ± 2.00 | K | NIST Webbook |

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|---|---|---|---|
| tf | 166.07 | K | Aqueous Solubility Prediction Method |
| tf | 165.78 ± 0.10 | K | NIST Webbook |
| tf | 165.75 ± 0.04 | K | NIST Webbook |
| tf | 165.76 ± 0.02 | K | NIST Webbook |
| tf | 165.84 ± 0.06 | K | NIST Webbook |
| tf | 165.76 ± 0.02 | K | NIST Webbook |
| tf | 165.73 ± 0.10 | K | NIST Webbook |
| tf | 165.73 ± 0.10 | K | NIST Webbook |
| tf | 165.73 ± 0.10 | K | NIST Webbook |
| tf | 165.73 ± 0.06 | K | NIST Webbook |
| tf | 165.73 ± 0.06 | K | NIST Webbook |
| tf | 165.73 ± 0.06 | K | NIST Webbook |
| tf | 165.77 ± 0.09 | K | NIST Webbook |
| tf | 165.77 ± 0.05 | K | NIST Webbook |
| tf | 165.76 ± 0.06 | K | NIST Webbook |
| tf | 165.76 ± 0.03 | K | NIST Webbook |
| tf | 165.85 ± 0.20 | K | NIST Webbook |
| tf | 165.73 ± 0.10 | K | NIST Webbook |
| tf | 165.83 ± 0.20 | K | NIST Webbook |
| tf | 165.75 ± 0.15 | K | NIST Webbook |
| tf | 165.76 ± 0.03 | K | NIST Webbook |
| tf | 165.77 ± 0.02 | K | NIST Webbook |
| tf | 165.75 ± 0.30 | K | NIST Webbook |
| tf | 165.75 ± 0.12 | K | NIST Webbook |
| tf | 165.77 ± 0.05 | K | NIST Webbook |
| tf | 165.78 ± 0.03 | K | NIST Webbook |
| tf | 165.75 ± 0.04 | K | NIST Webbook |
| tf | 165.77 ± 0.02 | K | NIST Webbook |
| tf | 165.78 ± 0.20 | K | NIST Webbook |
| tf | 165.75 ± 0.01 | K | NIST Webbook |
| tf | 165.83 ± 0.30 | K | NIST Webbook |
| tf | 165.83 ± 0.30 | K | NIST Webbook |
| tf | 165.75 ± 0.50 | K | NIST Webbook |
| tf | 165.78 ± 0.20 | K | NIST Webbook |
| tf | 165.78 ± 0.07 | K | NIST Webbook |
| tf | 165.55 ± 0.40 | K | NIST Webbook |
| tf | 165.76 ± 0.06 | K | NIST Webbook |
| tf | 165.55 ± 0.20 | K | NIST Webbook |
| tt | 165.30 ± 0.20 | K | NIST Webbook |
| tt | 165.76 ± 0.40 | K | NIST Webbook |
| vc | 0.482 ± 0.020 | m3/kmol | NIST Webbook |
| vc | 0.468 | m3/kmol | NIST Webbook |
| vc | 0.468 | m3/kmol | KDB |
| zc | 0.2660130 | | KDB |

| | | |
|---|---|---|
| zra | 0.27 | KDB |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 301.48 | J/mol×K | 527.37 | Joback Method |
| cpg | 233.00 | J/mol×K | 378.77 | Joback Method |
| cpg | 248.05 | J/mol×K | 408.49 | Joback Method |
| cpg | 262.39 | J/mol×K | 438.21 | Joback Method |
| cpg | 276.06 | J/mol×K | 467.93 | Joback Method |
| cpg | 289.08 | J/mol×K | 497.65 | Joback Method |
| cpg | 313.27 | J/mol×K | 557.09 | Joback Method |
| cpl | 242.49 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 233.90 | J/mol×K | 295.20 | NIST Webbook |
| cpl | 233.70 | J/mol×K | 300.00 | NIST Webbook |
| cpl | 241.00 | J/mol×K | 301.90 | NIST Webbook |
| cpl | 238.57 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 242.49 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 237.80 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 237.80 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 238.87 | J/mol×K | 298.15 | NIST Webbook |
| cpl | 237.85 | J/mol×K | 293.15 | NIST Webbook |
| cpl | 239.71 | J/mol×K | 298.15 | NIST Webbook |
| dvisc | 0.0004844 | Pa×s | 298.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |
| dvisc | 0.0005125 | Pa×s | 293.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |

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|---|---|---|---|---|
| dvisc | 0.0004080 | Pa×s | 313.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| dvisc | 0.0003880 | Pa×s | 318.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| dvisc | 0.0003690 | Pa×s | 323.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| dvisc | 0.0004586 | Pa×s | 303.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |
| dvisc | 0.0004216 | Pa×s | 308.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |
| dvisc | 0.0004130 | Pa×s | 313.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |

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|---|---|---|---|---|
| dvisc | 0.0004780 | Pa×s | 298.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| dvisc | 0.0005439 | Pa×s | 288.15 | Densities and viscosities of binary and ternary mixtures of cyclohexanone, 1,4-dioxane and isooctane from T = (288.15 to 313.15) K |
| dvisc | 0.0004290 | Pa×s | 308.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| dvisc | 0.0004530 | Pa×s | 303.15 | Densities and Viscosities of Binary Mixtures of 2,2,4-Trimethylpentane + 1-Propanol, + 1-Pentanol, + 1-Hexanol, and + 1-Heptanol from (298.15 to 323.15) K |
| hfust | 9.21 | kJ/mol | 165.79 | NIST Webbook |
| hfust | 9.04 | kJ/mol | 165.30 | NIST Webbook |
| hfust | 9.04 | kJ/mol | 165.30 | NIST Webbook |
| hfust | 9.20 | kJ/mol | 165.80 | NIST Webbook |
| hfust | 9.04 | kJ/mol | 165.30 | NIST Webbook |
| hvapt | 31.50 | kJ/mol | 453.50 | NIST Webbook |
| hvapt | 31.00 | kJ/mol | 371.00 | NIST Webbook |
| hvapt | 34.40 ± 0.10 | kJ/mol | 313.00 | NIST Webbook |
| hvapt | 34.80 | kJ/mol | 335.50 | NIST Webbook |
| hvapt | 40.70 | kJ/mol | 246.50 | NIST Webbook |
| hvapt | 31.40 | kJ/mol | 517.00 | NIST Webbook |
| hvapt | 32.60 ± 0.10 | kJ/mol | 343.00 | NIST Webbook |
| hvapt | 32.20 | kJ/mol | 394.00 | NIST Webbook |
| hvapt | 31.60 | kJ/mol | 473.00 | NIST Webbook |

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|---|---|---|---|---|
| hvapt | 36.10 | kJ/mol | 311.00 | NIST Webbook |
| hvapt | 33.90 | kJ/mol | 358.50 | NIST Webbook |
| hvapt | 30.79 | kJ/mol | 372.40 | NIST Webbook |
| hvapt | 31.01 | kJ/mol | 372.40 | KDB |
| hvapt | 31.70 ± 0.10 | kJ/mol | 358.00 | NIST Webbook |
| hvapt | 31.00 ± 0.10 | kJ/mol | 368.00 | NIST Webbook |
| hvapt | 34.30 ± 0.10 | kJ/mol | 313.00 | NIST Webbook |
| hvapt | 33.20 ± 0.10 | kJ/mol | 333.00 | NIST Webbook |
| hvapt | 32.00 ± 0.10 | kJ/mol | 353.00 | NIST Webbook |
| hvapt | 33.40 ± 0.10 | kJ/mol | 328.00 | NIST Webbook |
| kvisc | 0.0000005 | m2/s | 323.15 | Density, Viscosity, and Speed of Sound of Solutions of AOT Reverse Micelles in 2,2,4-Trimethylpentane |
| kvisc | 0.0000006 | m2/s | 313.15 | Density, Viscosity, and Speed of Sound of Solutions of AOT Reverse Micelles in 2,2,4-Trimethylpentane |
| kvisc | 0.0000007 | m2/s | 303.15 | Density, Viscosity, and Speed of Sound of Solutions of AOT Reverse Micelles in 2,2,4-Trimethylpentane |
| kvisc | 0.0000007 | m2/s | 293.15 | Density, Viscosity, and Speed of Sound of Solutions of AOT Reverse Micelles in 2,2,4-Trimethylpentane |
| kvisc | 0.0000007 | m2/s | 298.15 | Density, Viscosity, and Speed of Sound of Solutions of AOT Reverse Micelles in 2,2,4-Trimethylpentane |
| pvap | 12.95 | kPa | 313.15 | Phase equilibrium properties of binary and ternary mixtures containing 2-butanol, 2,2,4-trimethylpentane and 1-hexene at 313.15 K |

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| pvap | 101.30 | kPa | 372.33 | Measurements and correlation of vapour liquid equilibria of 2-butanone and hydrocarbons binary systems at two different pressures |
| pvap | 3.05 | kPa | 283.60 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 3.99 | kPa | 288.40 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 5.18 | kPa | 293.40 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 6.63 | kPa | 298.30 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 6.62 | kPa | 298.40 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 8.39 | kPa | 303.30 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |

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| pvap | 10.53 | kPa | 308.20 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 12.97 | kPa | 313.10 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 15.96 | kPa | 318.10 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 19.54 | kPa | 323.00 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 23.81 | kPa | 328.00 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 28.66 | kPa | 332.80 | A milliliter-scale setup for the efficient characterization of isothermal vapor-liquid equilibria using Raman spectroscopy |
| pvap | 12.95 | kPa | 313.15 | Vapour-liquid equilibria of binary and ternary mixtures containing 1-butanol, 2,2,4-trimethylpentane and 1-hexene at T = 313.15 K |

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| pvap | 8.33 | kPa | 303.15 | Measurement and Correlation of Isothermal Binary Vapor Liquid Equilibrium for Diethyl Carbonate + Isooctane/n-Heptane/Toluene Systems |
| pvap | 10.44 | kPa | 308.15 | Measurement and Correlation of Isothermal Binary Vapor Liquid Equilibrium for Diethyl Carbonate + Isooctane/n-Heptane/Toluene Systems |
| pvap | 12.97 | kPa | 313.15 | Measurement and Correlation of Isothermal Binary Vapor Liquid Equilibrium for Diethyl Carbonate + Isooctane/n-Heptane/Toluene Systems |
| pvap | 15.98 | kPa | 318.15 | Measurement and Correlation of Isothermal Binary Vapor Liquid Equilibrium for Diethyl Carbonate + Isooctane/n-Heptane/Toluene Systems |
| pvap | 19.54 | kPa | 323.15 | Measurement and Correlation of Isothermal Binary Vapor Liquid Equilibrium for Diethyl Carbonate + Isooctane/n-Heptane/Toluene Systems |
| pvap | 101.30 | kPa | 372.26 | Low-Pressure VLE Measurements and Thermodynamic Modeling, with PSRK and NRTL, of Binary 1-Alcohol + n-Alkane Systems |

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| pvap | 103.49 | kPa | 373.10 | Phase Equilibria on Four Binary Systems: 1,2-Dichloroethane + trans-1,2-Dichloroethylene, 1-Octene + 2-Methyl Thiophene, 2-Ethyl Thiophene + 2,2,4-Trimethylpentane, and Cyclopropanecarbonitrile + Water |
| pvap | 282.80 | kPa | 413.15 | Phase Equilibria on Four Binary Systems: 1,2-Dichloroethane + trans-1,2-Dichloroethylene, 1-Octene + 2-Methyl Thiophene, 2-Ethyl Thiophene + 2,2,4-Trimethylpentane, and Cyclopropanecarbonitrile + Water |
| pvap | 101.33 | kPa | 372.35 | Vapor-Liquid Equilibrium of Ferrocene in Some Organic Solvents Using Spectroscopic Methods |
| pvap | 20.00 | kPa | 323.65 | Measurements and correlation of vapour liquid equilibria of 2-butanone and hydrocarbons binary systems at two different pressures |
| pvap | 12.96 | kPa | 313.15 | Vapor Liquid Equilibria of Binary Mixtures Containing 2-Butanol and Hydrocarbons at 313.15 K |
| pvap | 100.05 | kPa | 371.55 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |

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| pvap | 104.94 | kPa | 373.40 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 124.90 | kPa | 379.80 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 149.96 | kPa | 386.94 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 174.70 | kPa | 393.14 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 199.94 | kPa | 398.64 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |

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| pvap | 224.91 | kPa | 403.68 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 249.95 | kPa | 408.28 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 250.00 | kPa | 408.30 | Isobaric Vapor Liquid Equilibrium for Binary Systems of 2,2,4-Trimethylpentane with o-Xylene, m-Xylene, p-Xylene, and Ethylbenzene at 250 kPa |
| pvap | 13.01 | kPa | 313.15 | Vapor-Liquid Equilibria of Binary Mixtures Containing 1-Butanol and Hydrocarbons at 313.15 K |
| pvap | 12.97 | kPa | 313.15 | Thermodynamic behaviour of second generation biofuels: Vapour liquid equilibria and excess enthalpies of the binary mixtures 2-pentanol and n-heptane or 2,2,4-trimethylpentane |
| rfi | 1.38240 | | 308.15 | Excess properties of the binary mixtures of methylcyclohexane + alkanes (C6 to C12) at T = 298.15 K to T = 308.15 K |
| rfi | 1.38898 | | 298.15 | KDB |

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| rfi | 1.38887 | 298.15 | Isobaric vapor liquid equilibria for mixtures of acetone, ethanol, and 2,2,4-trimethylpentane at 101.3 kPa |
| rfi | 1.38887 | 298.15 | Vapor liquid equilibria for binary and ternary mixtures of ethanol, 2-butanone, and 2,2,4-trimethylpentane at 101.3 kPa |
| rfi | 1.38900 | 298.15 | Vapor liquid equilibrium for binary system of thiophene + 2,2,4-trimethylpentane at 343.15 and 353.15K and thiophene + 2-ethoxy-2-methylpropane at 333.15 and 343.15K |
| rfi | 1.38894 | 298.15 | Isothermal vapour liquid equilibria in the binary and ternary systems composed of 2-propanol, 3-methyl-2-butanone and 2,2,4-trimethylpentane |
| rfi | 1.38917 | 298.15 | Liquid liquid equilibria of lactam containing binary systems |
| rfi | 1.38898 | 298.15 | Isothermal vapor liquid equilibrium at 333.15K and excess molar volumes and refractive indices at 298.15K for the mixtures of di-methyl carbonate, ethanol and 2,2,4-trimethylpentane |
| rfi | 1.38890 | 298.15 | Phase equilibria on four binary systems containing 3-methylthiophene |

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| rfi | 1.38890 | 298.15 | Excess molar volumes, excess molar enthalpies and refractive index deviations for binary mixtures of propan-1-ol, butan-1-ol and pentan-1-ol with 2,2,4-trimethylpentane at 298.15 K |
| rfi | 1.38800 | 298.15 | Excess properties of the binary mixtures of methylcyclohexane + alkanes (C6 to C12) at T = 298.15 K to T = 308.15 K |
| rfi | 1.38910 | 298.20 | Vapor-Liquid Equilibrium Measurements of Ether Alcohol Blends for Investigation on Reformulated Gas |
| rfi | 1.38887 | 298.15 | Vapor-Liquid Equilibria for Binary and Ternary Mixtures of 1,3-Dioxolane, 2-Propanol, and 2,2,4-Trimethylpentane at 101.3 kPa |
| rfi | 1.38902 | 298.15 | Densities and Viscosities for Binary and Ternary Mixtures of Ethanol, 2-Butanone, and 2,2,4-Trimethylpentane at T = (298.15, 308.15, and 318.15) K |
| rfi | 1.38921 | 298.10 | Liquid-Liquid Equilibria for [C8mim][NTf2] + Thiophene + 2,2,4-Trimethylpentane or + Toluene |
| rfi | 1.38920 | 298.15 | Isothermal Vapor Liquid Equilibrium Data of Propan-1-ol + 2,2,4-Trimethylpentane and Butan-1-ol + 2,2,4-Trimethylpentane at 318.15 K |

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| rfi | 1.38900 | 298.15 | Vapor-Liquid Equilibrium for Binary System of Diethyl Sulfide + n-Heptane and Diethyl Sulfide + 2,2,4-Trimethylpentane at (363.15 and 353.15) K |
| rfi | 1.38395 | 308.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Diisopropyl Ether, Ethanol, and 2,2,4-Trimethylpentane |
| rfi | 1.38900 | 298.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Diisopropyl Ether, Ethanol, and 2,2,4-Trimethylpentane |
| rfi | 1.39404 | 288.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Diisopropyl Ether, Ethanol, and 2,2,4-Trimethylpentane |
| rfi | 1.37898 | 318.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Ethanol, 2-Methylpropan-2-ol, and 2,2,4-Trimethylpentane |
| rfi | 1.38398 | 308.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Ethanol, 2-Methylpropan-2-ol, and 2,2,4-Trimethylpentane |

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| rfi | 1.38898 | 298.15 | Densities, Viscosities, and Refractive Indices for Binary and Ternary Mixtures of Ethanol, 2-Methylpropan-2-ol, and 2,2,4-Trimethylpentane |
| rfi | 1.38395 | 308.15 | Densities, Refractive indices and Viscosities for Binary and Ternary Mixtures of Acetone, Ethanol and 2,2,4-Trimethylpentane at T = (288.15, 298.15, and 308.15) K |
| rfi | 1.38900 | 298.15 | Densities, Refractive indices and Viscosities for Binary and Ternary Mixtures of Acetone, Ethanol and 2,2,4-Trimethylpentane at T = (288.15, 298.15, and 308.15) K |
| rfi | 1.38520 | 303.15 | Excess properties of the binary mixtures of methylcyclohexane + alkanes (C6 to C12) at T = 298.15 K to T = 308.15 K |
| rfi | 1.39404 | 288.15 | Densities, Refractive indices and Viscosities for Binary and Ternary Mixtures of Acetone, Ethanol and 2,2,4-Trimethylpentane at T = (288.15, 298.15, and 308.15) K |

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| rfi | 1.38905 | 298.15 | Measurement of VLE Data by Using an Experimental Installation with Automatic Control: Modeling of Binary Systems of Methyl Acetate or Ethyl Acetate with n-Heptane or 2,2,4-Trimethylpentane at Both 0.1 and 1.5 MPa |
| rfi | 1.38900 | 298.15 | A Study on Alkane + Ester + Ester Systems. Physicochemical Behavior of Binaries and Ternaries of Octane or Iso-octane with Methyl Esters (Ethanoate, Butanoate, Pentanoate) |
| rfi | 1.38901 | 298.15 | Volumetric behaviour of the (2,2,4-trimethylpentane + methylbenzene + butan-1-ol) ternary system and its binary sub-systems within the temperature range (298.15-328.15) K |
| rfi | 1.38904 | 298.15 | (Vapour + liquid) equilibria for binary and ternary mixtures of 2-propanol, tetrahydropyran, and 2,2,4-trimethylpentane at P = 101.3 kPa |
| rfi | 1.38894 | 298.15 | Isothermal (vapour + liquid) equilibria in the binary and ternary systems composed of 2-propanol, 2,2,4-trimethylpentane, and 2,4-dimethyl-3-pentanone |

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| rfi | 1.38905 | | 298.15 | Volumetric behaviour of binary liquid systems composed of toluene, isooctane, and methyl tert-butyl ether at temperatures from (298.15 to 328.15) K |
| rfi | 1.38890 | | 298.15 | (Vapor + liquid) equilibria of binary mixtures formed by iso-octane with a variety of compounds at 95.8 kPa |
| rfi | 1.38894 | | 293.15 | Isothermal Vapor-Liquid Equilibria in the Two Binary and the Ternary Systems Composed of tert-Amyl Methyl Ether, tert-Butanol, and Isooctane |
| rhol | 671.05 | kg/m3 | 318.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 704.10 | kg/m3 | 278.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |

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| rhol | 687.74 | kg/m3 | 298.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 683.61 | kg/m3 | 303.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 679.47 | kg/m3 | 308.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 675.29 | kg/m3 | 313.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |

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| rhol | 671.09 | kg/m3 | 318.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 666.86 | kg/m3 | 323.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 691.91 | kg/m3 | 293.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 687.82 | kg/m3 | 298.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |

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| rhol | 683.68 | kg/m3 | 303.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 679.51 | kg/m3 | 308.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 675.32 | kg/m3 | 313.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 700.05 | kg/m3 | 283.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 666.80 | kg/m3 | 323.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |

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| rhol | 658.20 | kg/m3 | 333.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 649.44 | kg/m3 | 343.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions of Binary Mixtures of 2,2,4-Trimethylpentane with Several Alkylated Cyclohexanes from (293.15 to 343.15) K |
| rhol | 687.81 | kg/m3 | 298.15 | Liquid Liquid Equilibria, Equilibrium Phase Densities, and Refractive Indices for the Quaternary Mixtures Containing 2-Propanol or 2-Methyl-2-Propanol of Fuel Oxygenate at T = 298.15 and 318.15 K |
| rhol | 692.00 | kg/m3 | 293.15 | Experimental Solubility Data for Binary Mixtures of Ethane and 2,2,4-Trimethylpentane at Pressures up to 6 MPa Using a New Variable-Volume Sapphire Cell |
| rhol | 687.32 | kg/m3 | 298.15 | Liquid-Liquid Equilibria for 2-Phenylethan-1-ol + Alkane Systems |

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| rhol | 687.72 | kg/m3 | 298.20 | Apparent and Partial Molar Volumes at Infinite Dilution and Solid Liquid Equilibria of Dibenzothiophene + Alkane Systems |
| rhol | 675.23 | kg/m3 | 313.20 | Apparent and Partial Molar Volumes at Infinite Dilution and Solid Liquid Equilibria of Dibenzothiophene + Alkane Systems |
| rhol | 687.62 | kg/m3 | 298.15 | Excess Volumes of Ternary Mixtures 2,2,4-Trimethylpentane + Diisopropyl Ether or Methyl tert-Butyl Ether + Methanol, Ethanol, or 1-Propanol at 298.15 K |
| rhol | 687.77 | kg/m3 | 298.15 | Thermodynamics of Mixtures Containing a Very Strongly Polar Compound. 10. Liquid Liquid Equilibria for N,N-Dimethylacetamide + Selected Alkanes |
| rhol | 691.84 | kg/m3 | 293.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 687.70 | kg/m3 | 298.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |

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| rhol | 683.59 | kg/m3 | 303.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 679.40 | kg/m3 | 308.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 675.23 | kg/m3 | 313.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 670.98 | kg/m3 | 318.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 666.75 | kg/m3 | 323.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |

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| rhol | 662.44 | kg/m3 | 328.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 658.16 | kg/m3 | 333.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 653.80 | kg/m3 | 338.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 649.40 | kg/m3 | 343.15 | Density, Viscosity, Speed of Sound, Bulk Modulus, and Surface Tension of Binary Mixtures of n-Heptane + 2,2,4-Trimethylpentane at (293.15 to 338.15) K and 0.1 MPa |
| rhol | 692.05 | kg/m3 | 293.15 | Isothermal Binary and Ternary VLE for the Mixtures of Propyl Vinyl Ether + Ethanol + Isooctane at 323.15 K and VE at 293.15 K |

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| rhol | 688.18 | kg/m3 | 298.15 | Binary LLE for Propyl Vinyl Ether (PVE) + Water, Ternary LLE for PVE + Methanol or Ethanol + Water at 298.15 K, and VE and centsR at 293.15 K for the Mixture of PVE + Ethanol + 2,2,4-Trimethylpentane |
| rhol | 683.74 | kg/m3 | 303.15 | Isothermal VLE and VE at 303.15 K for the Binary and Ternary Mixtures of Di-isopropyl Ether (DIPE) + 1-Propanol + 2,2,4-Trimethylpentane |
| rhol | 687.91 | kg/m3 | 298.15 | Liquid Liquid Equilibrium for Ternary Systems of Propyl Vinyl Ether + C3 or C4 Alcohols + Water at 298.15 K and Excess Molar Enthalpies for Ternary and Constituent Binary Systems of Propyl Vinyl Ether + Ethanol + Isooctane at 303.15 K |
| rhol | 687.76 | kg/m3 | 298.15 | Thermodynamics of Mixtures Containing a Strongly Polar Compound. 9. Liquid-Liquid Equilibria for epsilon-Caprolactam + Selected Alkanes |
| rhol | 695.98 | kg/m3 | 288.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 691.89 | kg/m3 | 293.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |

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| rhol | 687.77 | kg/m3 | 298.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 683.64 | kg/m3 | 303.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 679.48 | kg/m3 | 308.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 675.28 | kg/m3 | 313.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 671.07 | kg/m3 | 318.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 666.81 | kg/m3 | 323.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 658.19 | kg/m3 | 333.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 653.81 | kg/m3 | 338.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| rhol | 649.40 | kg/m3 | 343.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |

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| rhol | 688.03 | kg/m3 | 298.15 | Excess enthalpies of binary mixtures of 1-hexene with some branched alkanes at the temperature 298.15 K |
| rhol | 687.82 | kg/m3 | 298.15 | Isobaric vapor-liquid equilibrium, density and speed of sound of binary mixtures 2,2,4-trimethylpentane + 1-butanol or dibutyl ether (DBE) at 101.3 kPa |
| rhol | 687.32 | kg/m3 | 298.15 | Thermodynamics of aromatic polar compound (alkanone, alkanal or alkanoate) + hydrocarbon mixtures |
| rhol | 690.40 | kg/m3 | 295.00 | High-pressure vapor-liquid equilibria of the second generation biofuel blends (2-methylfuran + iso-octane) and (2-methyltetrahydrofuran + di-n-butyl ether): Experiments and PCP-SAFT modeling |
| rhol | 666.84 | kg/m3 | 323.00 | Volumetric behavior of the binary systems benzene + cyclohexane and benzene + 2,2,4-trimethyl-pentane at temperatures 293.15-323.15K |
| rhol | 675.30 | kg/m3 | 313.00 | Volumetric behavior of the binary systems benzene + cyclohexane and benzene + 2,2,4-trimethyl-pentane at temperatures 293.15-323.15K |

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|---|---|---|---|---|
| rhol | 683.64 | kg/m3 | 303.00 | Volumetric behavior of the binary systems benzene + cyclohexane and benzene + 2,2,4-trimethyl-pentane at temperatures 293.15-323.15K |
| rhol | 691.88 | kg/m3 | 293.00 | Volumetric behavior of the binary systems benzene + cyclohexane and benzene + 2,2,4-trimethyl-pentane at temperatures 293.15-323.15K |
| rhol | 687.72 | kg/m3 | 298.15 | Phase equilibria for binary systems of octane boosters with 2,2,4-trimethylpentane |
| rhol | 692.00 | kg/m3 | 293.00 | KDB |
| rhol | 691.83 | kg/m3 | 293.15 | Density and Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane + n-Heptane, 2,2,4-Trimethylpentane + n-Octane, Ethyl Acetate + Benzene, and Butanenitrile + Benzene from (293.15 to 323.15) K |
| rhol | 662.52 | kg/m3 | 328.15 | Advanced calibration, adjustment, and operation of a density and sound speed analyzer |
| sfust | 55.56 | J/mol×K | 165.79 | NIST Webbook |
| sfust | 54.70 | J/mol×K | 165.30 | NIST Webbook |
| speedsl | 1040.53 | m/s | 308.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |

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|---|---|---|---|---|
| speedsl | 979.25 | m/s | 323.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 989.37 | m/s | 320.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 999.53 | m/s | 318.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1009.71 | m/s | 315.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1019.94 | m/s | 313.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1030.22 | m/s | 310.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1124.31 | m/s | 288.15 | Temperature influence on mixing properties of {ethyl tert-butyl ether (ETBE) + gasoline additives} |
| speedsl | 1050.89 | m/s | 305.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |

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|---|---|---|---|---|
| speedsl | 1082.20 | m/s | 298.15 | Temperature influence on mixing properties of {ethyl tert-butyl ether (ETBE) + gasoline additives} |
| speedsl | 979.25 | m/s | 323.15 | Temperature influence on mixing properties of {ethyl tert-butyl ether (ETBE) + gasoline additives} |
| speedsl | 1071.72 | m/s | 300.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1082.20 | m/s | 298.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1092.66 | m/s | 295.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1103.30 | m/s | 293.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1113.83 | m/s | 290.65 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| speedsl | 1124.31 | m/s | 288.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |

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|---|---|---|---|---|
| speedsl | 1061.30 | m/s | 303.15 | Influence of Temperature on Thermodynamic Properties of Methyl t-Butyl Ether (MTBE)+Gasoline Additives |
| srf | 0.02 | N/m | 288.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 308.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 318.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 303.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 298.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 313.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 323.15 | Surface Tension of Binary Mixtures of 2,2,4-Trimethylpentane +1-Alkanols from 298.15 to 323.15 K |
| srf | 0.02 | N/m | 298.20 | KDB |

| | | | | |
|---|---|---|---|---|
| srf | 0.02 | N/m | 298.15 | Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydofuran, 2-Propanol, and 2,2,4-Trimethylpentane |
| srf | 0.02 | N/m | 308.15 | Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydofuran, 2-Propanol, and 2,2,4-Trimethylpentane |
| srf | 0.02 | N/m | 288.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K |
| srf | 0.02 | N/m | 298.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K |
| srf | 0.02 | N/m | 288.15 | Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydofuran, 2-Propanol, and 2,2,4-Trimethylpentane |

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|---|---|---|---|---|
| srf | 0.02 | N/m | 308.15 | Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K |
| tcondl | 0.09 | W/m×K | 327.69 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.09 | W/m×K | 328.14 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.09 | W/m×K | 314.22 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.09 | W/m×K | 313.79 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.09 | W/m×K | 314.02 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |

| | | | | |
|---|---|---|---|---|
| tcondl | 0.10 | W/m×K | 277.52 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 296.10 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 295.90 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 295.67 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 277.93 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 277.74 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 259.52 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |

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|---|---|---|---|---|
| tcondl | 0.10 | W/m×K | 259.32 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.10 | W/m×K | 259.11 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |
| tcondl | 0.09 | W/m×K | 327.93 | Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: CnH2n+2 (n = 6 to 8) |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.40806e+01 |
| Coeff. B | -3.12864e+03 |
| Coeff. C | -4.17450e+01 |
| Temperature range (K), min. | 268.57 |
| Temperature range (K), max. | 398.53 |

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/T + C*ln(T) + D*T^2 |
| Coeff. A | 8.67458e+01 |
| Coeff. B | -7.04177e+03 |
| Coeff. C | -1.08858e+01 |
| Coeff. D | 8.87277e-06 |
| Temperature range (K), min. | 165.78 |
| Temperature range (K), max. | 543.96 |

# Datasets

## Viscosity, Pa*s

| Temperature, K - Liquid | Pressure, kPa - Liquid | Viscosity, Pa*s - Liquid |
|---|---|---|
| 293.15 | 100.00 | 0.0005064 |
| 293.15 | 1000.00 | 0.0005100 |
| 293.15 | 5000.00 | 0.0005399 |
| 293.15 | 10000.00 | 0.0005733 |
| 293.15 | 20000.00 | 0.0006366 |
| 293.15 | 30000.00 | 0.0007059 |
| 293.15 | 40000.00 | 0.0007817 |
| 293.15 | 50000.00 | 0.0008608 |
| 293.15 | 60000.00 | 0.0009567 |
| 293.15 | 70000.00 | 0.0010416 |
| 293.15 | 80000.00 | 0.0011268 |
| 293.15 | 100000.00 | 0.0013157 |
| 293.15 | 120000.00 | 0.0015180 |
| 293.15 | 140000.00 | 0.0017391 |
| 298.15 | 100.00 | 0.0004746 |
| 298.15 | 1000.00 | 0.0004819 |
| 298.15 | 5000.00 | 0.0005090 |
| 298.15 | 10000.00 | 0.0005388 |
| 298.15 | 20000.00 | 0.0006027 |
| 298.15 | 30000.00 | 0.0006672 |
| 298.15 | 40000.00 | 0.0007394 |
| 298.15 | 50000.00 | 0.0008154 |
| 298.15 | 60000.00 | 0.0008956 |
| 298.15 | 70000.00 | 0.0009815 |
| 298.15 | 80000.00 | 0.0010698 |
| 298.15 | 100000.00 | 0.0012345 |
| 298.15 | 120000.00 | 0.0014345 |
| 298.15 | 140000.00 | 0.0016480 |
| 313.15 | 100.00 | 0.0004035 |
| 313.15 | 1000.00 | 0.0004114 |
| 313.15 | 5000.00 | 0.0004353 |
| 313.15 | 10000.00 | 0.0004633 |
| 313.15 | 20000.00 | 0.0005177 |
| 313.15 | 30000.00 | 0.0005775 |
| 313.15 | 40000.00 | 0.0006351 |

| | | |
|---|---|---|
| 313.15 | 50000.00 | 0.0006902 |
| 313.15 | 60000.00 | 0.0007509 |
| 313.15 | 70000.00 | 0.0008173 |
| 313.15 | 80000.00 | 0.0008861 |
| 313.15 | 100000.00 | 0.0010450 |
| 313.15 | 120000.00 | 0.0011953 |
| 313.15 | 140000.00 | 0.0013627 |
| 323.15 | 100.00 | 0.0003645 |
| 323.15 | 1000.00 | 0.0003694 |
| 323.15 | 5000.00 | 0.0003915 |
| 323.15 | 10000.00 | 0.0004157 |
| 323.15 | 20000.00 | 0.0004640 |
| 323.15 | 30000.00 | 0.0005146 |
| 323.15 | 40000.00 | 0.0005714 |
| 323.15 | 50000.00 | 0.0006255 |
| 323.15 | 60000.00 | 0.0006832 |
| 323.15 | 70000.00 | 0.0007420 |
| 323.15 | 80000.00 | 0.0007969 |
| 323.15 | 100000.00 | 0.0009249 |
| 323.15 | 120000.00 | 0.0010679 |
| 323.15 | 140000.00 | 0.0012102 |
| 333.15 | 100.00 | 0.0003265 |
| 333.15 | 1000.00 | 0.0003296 |
| 333.15 | 5000.00 | 0.0003515 |
| 333.15 | 10000.00 | 0.0003754 |
| 333.15 | 20000.00 | 0.0004216 |
| 333.15 | 30000.00 | 0.0004705 |
| 333.15 | 40000.00 | 0.0005232 |
| 333.15 | 50000.00 | 0.0005790 |
| 333.15 | 60000.00 | 0.0006246 |
| 333.15 | 70000.00 | 0.0006779 |
| 333.15 | 80000.00 | 0.0007280 |
| 333.15 | 100000.00 | 0.0008361 |
| 333.15 | 120000.00 | 0.0009606 |
| 333.15 | 140000.00 | 0.0010951 |
| 348.15 | 100.00 | 0.0002829 |
| 348.15 | 1000.00 | 0.0002863 |
| 348.15 | 5000.00 | 0.0003060 |
| 348.15 | 10000.00 | 0.0003274 |
| 348.15 | 20000.00 | 0.0003692 |
| 348.15 | 30000.00 | 0.0004131 |
| 348.15 | 40000.00 | 0.0004565 |
| 348.15 | 50000.00 | 0.0005022 |
| 348.15 | 60000.00 | 0.0005476 |

| | | |
|---|---|---|
| 348.15 | 70000.00 | 0.0006049 |
| 348.15 | 80000.00 | 0.0006507 |
| 348.15 | 100000.00 | 0.0007538 |
| 348.15 | 120000.00 | 0.0008640 |
| 348.15 | 140000.00 | 0.0009770 |
| 353.15 | 100.00 | 0.0002738 |
| 353.15 | 1000.00 | 0.0002748 |
| 353.15 | 5000.00 | 0.0002923 |
| 353.15 | 10000.00 | 0.0003175 |
| 353.15 | 20000.00 | 0.0003570 |
| 353.15 | 30000.00 | 0.0003966 |
| 353.15 | 40000.00 | 0.0004379 |
| 353.15 | 50000.00 | 0.0004853 |
| 353.15 | 60000.00 | 0.0005294 |
| 353.15 | 70000.00 | 0.0005738 |
| 353.15 | 80000.00 | 0.0006288 |
| 353.15 | 100000.00 | 0.0007176 |
| 353.15 | 120000.00 | 0.0008245 |
| 353.15 | 140000.00 | 0.0009332 |

Reference *https://www.doi.org/10.1016/j.jct.2015.12.021*

| Temperature, K | Pressure, kPa | Viscosity, Pa*s |
|---|---|---|
| 303.15 | 101.30 | 0.0004550 |

Reference *https://www.doi.org/10.1016/j.tca.2005.10.008*

## Refractive index (Na D-line)

| Temperature, K - Liquid | Pressure, kPa - Liquid | Refractive index (Na D-line) - Liquid |
|---|---|---|
| 298.15 | 101.33 | 1.38906 |
| 293.15 | 101.00 | 1.42109 |
| 303.15 | 101.00 | 1.41599 |
| 313.15 | 101.00 | 1.41092 |
| 323.15 | 101.00 | 1.40554 |
| 293.15 | 101.00 | 1.39161 |
| 303.15 | 101.00 | 1.3866 |
| 313.15 | 101.00 | 1.38143 |
| 323.15 | 101.00 | 1.37627 |

Reference https://www.doi.org/10.1016/j.jct.2010.08.019

## Mass density, kg/m3

| Pressure, kPa - Liquid | Temperature, K - Liquid | Mass density, kg/m3 - Liquid |
|---|---|---|
| 100.00 | 298.15 | 687.32 |

Reference https://www.doi.org/10.1016/j.jct.2017.09.027

## Speed of sound, m/s

| Temperature, K - Liquid | Pressure, kPa - Liquid | Speed of sound, m/s - Liquid |
|---|---|---|
| 294.06 | 100.00 | 1099.7 |
| 304.03 | 100.00 | 1058.5 |
| 313.81 | 100.00 | 1017.3 |
| 323.56 | 100.00 | 978.2 |
| 333.42 | 100.00 | 938.5 |
| 342.88 | 100.00 | 898.0 |
| 352.86 | 100.00 | 858.9 |
| 363.55 | 100.00 | 821.9 |
| 294.37 | 3000.00 | 1127.4 |
| 304.16 | 3000.00 | 1088.2 |
| 313.92 | 3000.00 | 1037.2 |
| 323.61 | 3000.00 | 999.1 |
| 333.48 | 3000.00 | 968.0 |
| 343.07 | 3000.00 | 927.9 |
| 352.89 | 3000.00 | 891.7 |
| 363.39 | 3000.00 | 852.2 |
| 373.04 | 3000.00 | 821.1 |
| 383.18 | 3000.00 | 783.2 |
| 393.83 | 3000.00 | 742.3 |
| 402.16 | 3000.00 | 716.5 |
| 412.57 | 3000.00 | 677.6 |
| 423.95 | 3000.00 | 636.8 |
| 434.51 | 3000.00 | 602.6 |
| 443.70 | 3000.00 | 569.7 |
| 452.94 | 3000.00 | 538.4 |

| | | |
|---|---|---|
| 462.54 | 3000.00 | 502.1 |
| 472.45 | 3000.00 | 464.2 |
| 483.15 | 3000.00 | 423.5 |
| 493.12 | 3000.00 | 386.4 |
| 502.80 | 3000.00 | 350.1 |
| 512.41 | 3000.00 | 311.4 |
| 523.31 | 3000.00 | 264.5 |
| 294.65 | 6000.00 | 1147.6 |
| 304.23 | 6000.00 | 1109.6 |
| 313.96 | 6000.00 | 1065.2 |
| 323.65 | 6000.00 | 1027.4 |
| 333.50 | 6000.00 | 996.0 |
| 343.16 | 6000.00 | 954.8 |
| 352.94 | 6000.00 | 921.1 |
| 363.49 | 6000.00 | 883.5 |
| 373.27 | 6000.00 | 843.9 |
| 383.80 | 6000.00 | 813.8 |
| 394.00 | 6000.00 | 782.2 |
| 402.48 | 6000.00 | 750.9 |
| 412.84 | 6000.00 | 719.3 |
| 424.32 | 6000.00 | 678.1 |
| 434.94 | 6000.00 | 647.4 |
| 444.00 | 6000.00 | 619.6 |
| 453.22 | 6000.00 | 588.3 |
| 463.04 | 6000.00 | 558.9 |
| 472.86 | 6000.00 | 530.7 |
| 483.63 | 6000.00 | 496.7 |
| 493.56 | 6000.00 | 464.9 |
| 503.17 | 6000.00 | 435.4 |
| 513.04 | 6000.00 | 404.0 |
| 523.97 | 6000.00 | 371.4 |
| 294.84 | 10000.00 | 1176.1 |
| 304.27 | 10000.00 | 1136.9 |
| 313.82 | 10000.00 | 1100.1 |
| 323.67 | 10000.00 | 1060.4 |
| 333.46 | 10000.00 | 1028.0 |
| 343.22 | 10000.00 | 990.3 |
| 353.01 | 10000.00 | 961.7 |
| 363.54 | 10000.00 | 925.7 |
| 373.41 | 10000.00 | 888.2 |
| 384.11 | 10000.00 | 855.6 |
| 394.15 | 10000.00 | 825.8 |
| 402.64 | 10000.00 | 800.2 |
| 413.07 | 10000.00 | 766.7 |

| | | |
|---|---|---|
| 424.49 | 10000.00 | 732.1 |
| 435.26 | 10000.00 | 701.0 |
| 444.22 | 10000.00 | 677.1 |
| 454.37 | 10000.00 | 648.8 |
| 463.43 | 10000.00 | 622.7 |
| 473.22 | 10000.00 | 596.3 |
| 484.05 | 10000.00 | 569.9 |
| 494.09 | 10000.00 | 542.2 |
| 503.79 | 10000.00 | 516.1 |
| 513.78 | 10000.00 | 491.8 |
| 524.59 | 10000.00 | 463.0 |
| 294.97 | 12000.00 | 1181.7 |
| 304.27 | 12000.00 | 1147.7 |
| 313.85 | 12000.00 | 1110.8 |
| 323.71 | 12000.00 | 1075.4 |
| 333.40 | 12000.00 | 1041.9 |
| 343.21 | 12000.00 | 1008.5 |
| 353.04 | 12000.00 | 975.5 |
| 363.58 | 12000.00 | 943.8 |
| 373.49 | 12000.00 | 908.6 |
| 384.26 | 12000.00 | 876.5 |
| 394.19 | 12000.00 | 848.1 |
| 402.78 | 12000.00 | 819.5 |
| 413.22 | 12000.00 | 791.3 |
| 424.59 | 12000.00 | 756.7 |
| 435.36 | 12000.00 | 726.5 |
| 444.36 | 12000.00 | 700.3 |
| 455.24 | 12000.00 | 671.1 |
| 463.72 | 12000.00 | 651.6 |
| 473.48 | 12000.00 | 627.7 |
| 484.30 | 12000.00 | 598.4 |
| 494.42 | 12000.00 | 576.5 |
| 504.09 | 12000.00 | 550.4 |
| 514.01 | 12000.00 | 526.6 |
| 524.70 | 12000.00 | 501.3 |

Reference *https://www.doi.org/10.1021/acs.jced.7b00712*

| Pressure, kPa | Temperature, K | Speed of sound, m/s |
|---|---|---|
| 100.00 | 293.15 | 1104.6 |
| 100.00 | 303.15 | 1061.7 |
| 100.00 | 313.15 | 1019.1 |
| 100.00 | 323.15 | 977.9 |

| | | |
|---|---|---|
| 100.00 | 333.15 | 935.8 |
| 100.00 | 343.15 | 897.3 |
| 100.00 | 353.15 | 858.2 |
| 100.00 | 363.15 | 817.2 |
| 100.00 | 373.15 | 780.4 |
| 10000.00 | 293.15 | 1178.5 |
| 10000.00 | 303.15 | 1139.3 |
| 10000.00 | 313.15 | 1100.9 |
| 10000.00 | 323.15 | 1063.5 |
| 10000.00 | 333.15 | 1026.6 |
| 10000.00 | 343.15 | 992.6 |
| 10000.00 | 353.15 | 958.0 |
| 10000.00 | 363.15 | 924.3 |
| 10000.00 | 373.15 | 891.0 |
| 20000.00 | 293.15 | 1244.6 |
| 20000.00 | 303.15 | 1208.6 |
| 20000.00 | 313.15 | 1173.0 |
| 20000.00 | 323.15 | 1138.8 |
| 20000.00 | 333.15 | 1105.2 |
| 20000.00 | 343.15 | 1071.6 |
| 20000.00 | 353.15 | 1041.7 |
| 20000.00 | 363.15 | 1011.1 |
| 20000.00 | 373.15 | 980.7 |
| 30000.00 | 293.15 | 1304.8 |
| 30000.00 | 303.15 | 1270.2 |
| 30000.00 | 313.15 | 1237.0 |
| 30000.00 | 323.15 | 1204.7 |
| 30000.00 | 333.15 | 1173.0 |
| 30000.00 | 343.15 | 1142.7 |
| 30000.00 | 353.15 | 1114.1 |
| 30000.00 | 363.15 | 1085.5 |
| 30000.00 | 373.15 | 1057.5 |
| 40000.00 | 293.15 | 1358.5 |
| 40000.00 | 303.15 | 1326.8 |
| 40000.00 | 313.15 | 1295.2 |
| 40000.00 | 323.15 | 1264.6 |
| 40000.00 | 333.15 | 1234.2 |
| 40000.00 | 343.15 | 1205.7 |
| 40000.00 | 353.15 | 1178.7 |
| 40000.00 | 363.15 | 1151.4 |
| 40000.00 | 373.15 | 1125.2 |
| 50000.00 | 293.15 | 1410.3 |
| 50000.00 | 303.15 | 1378.5 |
| 50000.00 | 313.15 | 1349.3 |

| | | |
|---|---|---|
| 50000.00 | 323.15 | 1319.0 |
| 50000.00 | 333.15 | 1290.2 |
| 50000.00 | 343.15 | 1262.9 |
| 50000.00 | 353.15 | 1236.1 |
| 50000.00 | 363.15 | 1211.3 |
| 50000.00 | 373.15 | 1185.9 |
| 60000.00 | 293.15 | 1458.1 |
| 60000.00 | 303.15 | 1427.0 |
| 60000.00 | 313.15 | 1397.6 |
| 60000.00 | 323.15 | 1369.8 |
| 60000.00 | 333.15 | 1341.8 |
| 60000.00 | 343.15 | 1315.4 |
| 60000.00 | 353.15 | 1290.4 |
| 60000.00 | 363.15 | 1265.7 |
| 60000.00 | 373.15 | 1242.1 |
| 70000.00 | 293.15 | 1502.5 |
| 70000.00 | 303.15 | 1472.6 |
| 70000.00 | 313.15 | 1443.4 |
| 70000.00 | 323.15 | 1416.6 |
| 70000.00 | 333.15 | 1390.0 |
| 70000.00 | 343.15 | 1363.5 |
| 70000.00 | 353.15 | 1339.5 |
| 70000.00 | 363.15 | 1316.6 |
| 70000.00 | 373.15 | 1293.1 |
| 80000.00 | 293.15 | 1544.7 |
| 80000.00 | 303.15 | 1515.6 |
| 80000.00 | 313.15 | 1487.6 |
| 80000.00 | 323.15 | 1461.2 |
| 80000.00 | 333.15 | 1434.9 |
| 80000.00 | 343.15 | 1410.8 |
| 80000.00 | 353.15 | 1386.8 |
| 80000.00 | 363.15 | 1364.4 |
| 80000.00 | 373.15 | 1341.5 |
| 90000.00 | 293.15 | 1584.5 |
| 90000.00 | 303.15 | 1556.4 |
| 90000.00 | 313.15 | 1529.0 |
| 90000.00 | 323.15 | 1503.4 |
| 90000.00 | 333.15 | 1479.0 |
| 90000.00 | 343.15 | 1453.6 |
| 90000.00 | 353.15 | 1431.0 |
| 90000.00 | 363.15 | 1408.2 |
| 90000.00 | 373.15 | 1386.0 |
| 100000.00 | 293.15 | 1622.6 |
| 100000.00 | 303.15 | 1594.5 |

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|---|---|---|
| 100000.00 | 313.15 | 1568.7 |
| 100000.00 | 323.15 | 1543.4 |
| 100000.00 | 333.15 | 1519.0 |
| 100000.00 | 343.15 | 1495.3 |
| 100000.00 | 353.15 | 1472.5 |
| 100000.00 | 363.15 | 1449.9 |
| 100000.00 | 373.15 | 1428.5 |
| 110000.00 | 293.15 | 1658.9 |
| 110000.00 | 303.15 | 1632.1 |
| 110000.00 | 313.15 | 1605.9 |
| 110000.00 | 323.15 | 1581.4 |
| 110000.00 | 333.15 | 1557.7 |
| 110000.00 | 343.15 | 1534.0 |
| 110000.00 | 353.15 | 1512.1 |
| 110000.00 | 363.15 | 1490.6 |
| 110000.00 | 373.15 | 1469.2 |
| 120000.00 | 293.15 | 1694.0 |
| 120000.00 | 303.15 | 1667.5 |
| 120000.00 | 313.15 | 1641.7 |
| 120000.00 | 323.15 | 1617.8 |
| 120000.00 | 333.15 | 1594.1 |
| 120000.00 | 343.15 | 1571.7 |
| 120000.00 | 353.15 | 1549.6 |
| 120000.00 | 363.15 | 1529.0 |
| 120000.00 | 373.15 | 1508.2 |
| 130000.00 | 293.15 | 1727.5 |
| 130000.00 | 303.15 | 1701.6 |
| 130000.00 | 313.15 | 1676.3 |
| 130000.00 | 323.15 | 1653.1 |
| 130000.00 | 333.15 | 1629.5 |
| 130000.00 | 343.15 | 1607.2 |
| 130000.00 | 353.15 | 1585.9 |
| 130000.00 | 363.15 | 1565.5 |
| 130000.00 | 373.15 | 1545.1 |
| 140000.00 | 293.15 | 1760.1 |
| 140000.00 | 303.15 | 1734.3 |
| 140000.00 | 313.15 | 1709.4 |
| 140000.00 | 323.15 | 1686.4 |
| 140000.00 | 333.15 | 1663.5 |
| 140000.00 | 343.15 | 1641.7 |
| 140000.00 | 353.15 | 1620.5 |
| 140000.00 | 363.15 | 1600.8 |
| 140000.00 | 373.15 | 1580.3 |
| 150000.00 | 293.15 | 1791.1 |

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|---|---|---|
| 150000.00 | 303.15 | 1766.4 |
| 150000.00 | 313.15 | 1741.7 |
| 150000.00 | 323.15 | 1718.6 |
| 150000.00 | 333.15 | 1696.2 |
| 150000.00 | 343.15 | 1675.0 |
| 150000.00 | 353.15 | 1654.1 |
| 150000.00 | 363.15 | 1634.2 |
| 150000.00 | 373.15 | 1614.0 |

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## Thermal conductivity, W/m/K

| Temperature, K - Liquid | Pressure, kPa - Liquid | Thermal conductivity, W/m/K - Liquid |
|---|---|---|
| 254.60 | 100.00 | 0.1047 |
| 254.51 | 5000.00 | 0.1066 |
| 254.67 | 10100.00 | 0.1088 |
| 254.77 | 20000.00 | 0.1121 |
| 254.73 | 30000.00 | 0.1157 |
| 274.66 | 100.00 | 0.1004 |
| 274.63 | 5000.00 | 0.1021 |
| 274.61 | 10000.00 | 0.1041 |
| 274.61 | 20000.00 | 0.1080 |
| 274.57 | 30000.00 | 0.1114 |
| 295.33 | 100.00 | 0.0959 |
| 295.22 | 5000.00 | 0.0979 |
| 295.22 | 10100.00 | 0.1003 |
| 295.06 | 20100.00 | 0.1042 |
| 295.04 | 30100.00 | 0.1083 |
| 314.99 | 100.00 | 0.0907 |
| 314.85 | 5000.00 | 0.0930 |
| 314.87 | 10000.00 | 0.0953 |
| 314.93 | 20000.00 | 0.0996 |
| 314.91 | 29900.00 | 0.1038 |
| 334.53 | 100.00 | 0.0859 |
| 334.49 | 5100.00 | 0.0886 |
| 334.56 | 10000.00 | 0.0908 |
| 334.62 | 20000.00 | 0.0958 |
| 334.59 | 30000.00 | 0.0999 |
| 354.50 | 200.00 | 0.0817 |
| 354.78 | 5100.00 | 0.0843 |

| | | |
|---|---|---|
| 354.83 | 10000.00 | 0.0868 |
| 354.73 | 20000.00 | 0.0915 |
| 354.80 | 30000.00 | 0.0960 |
| 374.63 | 400.00 | 0.0784 |
| 374.61 | 5000.00 | 0.0807 |
| 374.18 | 10000.00 | 0.0830 |
| 374.21 | 19900.00 | 0.0875 |
| 374.25 | 29900.00 | 0.0925 |

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# Legend

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| **af:** | Acentric Factor |
| **ap:** | Aniline Point |
| **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 |
| **gyrad:** | Radius of Gyration |
| **hcg:** | Heat of Combustion, Gross form |
| **hcn:** | Heat of Combustion, Net Form |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfl:** | Liquid phase enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |

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| **hfust:** | Enthalpy of fusion at a given temperature |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **hvapt:** | Enthalpy of vaporization at a given temperature |
| **ie:** | Ionization energy |
| **kvisc:** | Kinematic viscosity |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **nfpaf:** | NFPA Fire Rating |
| **pc:** | Critical Pressure |
| **pvap:** | Vapor pressure |
| **rfi:** | Refractive Index |
| **rhoc:** | Critical density |
| **rhol:** | Liquid Density |
| **rinpol:** | Non-polar retention indices |
| **ripol:** | Polar retention indices |
| **sfust:** | Entropy of fusion at a given temperature |
| **sl:** | Liquid phase molar entropy at standard conditions |
| **speedsl:** | Speed of sound in fluid |
| **srf:** | Surface Tension |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tcondl:** | Liquid thermal conductivity |
| **tf:** | Normal melting (fusion) point |
| **tt:** | Triple Point Temperature |
| **vc:** | Critical Volume |
| **zc:** | Critical Compressibility |
| **zra:** | Rackett Parameter |

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