

Methyl Isobutyl Ketone

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|-----------------------------|--|
| Other names: | 2-Methyl-4-pentanal 2-Methyl-4-pentanone 2-Methylpropyl methyl ketone 2-Pentanone, 4-methyl- 4-METHYL-2-PENTANONE 4-Methyl-2-oxopentane 4-Methyl-2-pentanon 4-Methyl-pentan-2-on 4-Methylpentan-2-one 4-Metilpentan-2-one 4-methyl-2-pentanone (MIBK; methyl isobutyl ketone) HEXONE Hexon Isobutyl methyl ketone Isobutyl-methylketon Isopropylacetone Ketone, isobutyl methyl METHYL-ISO-BUTYL KETONE MIBK MIK Methyl i-butyl ketone Methyl-2-pentanon,4- Methyl-isobutyl-cetone Methylisobutylketon Metilisobutilchetone Metyloizobutyloketon NSC 5712 Rcra waste number U161 Shell MIBK UN 1245 ethyl iso-butyl ketone iso-C ₄ H ₉ COCH ₃ isopropyl acetone |
| Inchi: | InChI=1S/C6H12O/c1-5(2)4-6(3)7/h5H,4H2,1-3H3 |
| InchiKey: | NTIZESTWPVYFNL-UHFFFAOYSA-N |
| Formula: | C ₆ H ₁₂ O |
| SMILES: | CC(=O)CC(C)C |
| Mol. weight [g/mol]: | 100.16 |
| CAS: | 108-10-1 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|----------------|----------|--|
| af | 0.3850 | | KDB |
| aigt | 729.82 | K | KDB |
| chs | -3694.60 | kJ/mol | NIST Webbook |
| dm | 2.80 | debye | KDB |
| dvisc | 0.0005500 | Paxs | Viscosities, Densities, and Speeds of Sound of Binary Mixtures of o-Xylene, m-Xylene, p-Xylene, and Isopropylbenzene with 4-Methylpentan-2-one at 298.15 K |
| dvisc | 0.0005600 | Paxs | Viscosity of the Tributyl Phosphate + Methyl Isobutyl Ketone + Phosphoric Acid System |
| fil | 1.40 | % in Air | KDB |
| flu | 7.50 | % in Air | KDB |
| fpc | 297.04 | K | KDB |
| fpo | 295.93 | K | KDB |
| gf | -131.72 | kJ/mol | Joback Method |
| gyrad | 3.7400 | | KDB |
| hf | -284.00 | kJ/mol | KDB |
| hf | -291.20 ± 1.40 | kJ/mol | NIST Webbook |
| hfs | -381.50 | kJ/mol | NIST Webbook |
| hfus | 9.37 | kJ/mol | Joback Method |
| hvap | 40.65 | kJ/mol | NIST Webbook |
| hvap | 41.00 | kJ/mol | NIST Webbook |
| hvap | 40.56 | kJ/mol | NIST Webbook |
| hvap | 42.50 ± 0.10 | kJ/mol | NIST Webbook |
| ie | 9.42 | eV | NIST Webbook |
| ie | 9.30 ± 0.01 | eV | NIST Webbook |
| ie | 9.30 ± 0.01 | eV | NIST Webbook |
| ie | 9.30 ± 0.03 | eV | NIST Webbook |
| ie | 9.30 ± 0.02 | eV | NIST Webbook |
| ie | 9.34 ± 0.01 | eV | NIST Webbook |
| log10ws | -0.74 | | Estimated Solubility Method |
| log10ws | -0.96 | | Aqueous Solubility Prediction Method |
| logp | 1.621 | | Crippen Method |
| mcvol | 96.970 | ml/mol | McGowan Method |
| nfpaf | %!d(float64=3) | | KDB |

| nfpah | %!d(float64=2) | | KDB |
|--------|-----------------|-----|--------------|
| pc | 3390.00 ± 20.00 | kPa | NIST Webbook |
| pc | 3270.00 ± 5.00 | kPa | NIST Webbook |
| pc | 3270.00 | kPa | KDB |
| pc | 3280.00 ± 96.50 | kPa | NIST Webbook |
| rinpol | 723.00 | | NIST Webbook |
| rinpol | 729.50 | | NIST Webbook |
| rinpol | 716.00 | | NIST Webbook |
| rinpol | 733.30 | | NIST Webbook |
| rinpol | 730.00 | | NIST Webbook |
| rinpol | 738.00 | | NIST Webbook |
| rinpol | 719.00 | | NIST Webbook |
| rinpol | 742.00 | | NIST Webbook |
| rinpol | 720.00 | | NIST Webbook |
| rinpol | 709.00 | | NIST Webbook |
| rinpol | 714.00 | | NIST Webbook |
| rinpol | 728.00 | | NIST Webbook |
| rinpol | 753.00 | | NIST Webbook |
| rinpol | 721.00 | | NIST Webbook |
| rinpol | 739.00 | | NIST Webbook |
| rinpol | 739.00 | | NIST Webbook |
| rinpol | 729.60 | | NIST Webbook |
| rinpol | 741.00 | | NIST Webbook |
| rinpol | 732.00 | | NIST Webbook |
| rinpol | 735.00 | | NIST Webbook |
| rinpol | 725.00 | | NIST Webbook |
| rinpol | 730.00 | | NIST Webbook |
| rinpol | 749.00 | | NIST Webbook |
| rinpol | 759.00 | | NIST Webbook |
| rinpol | 732.00 | | NIST Webbook |
| rinpol | 728.00 | | NIST Webbook |
| rinpol | 740.00 | | NIST Webbook |
| rinpol | 698.00 | | NIST Webbook |
| rinpol | 721.00 | | NIST Webbook |
| rinpol | 730.00 | | NIST Webbook |
| rinpol | 730.00 | | NIST Webbook |
| rinpol | 722.00 | | NIST Webbook |
| rinpol | 713.00 | | NIST Webbook |
| rinpol | 733.00 | | NIST Webbook |
| rinpol | 720.00 | | NIST Webbook |
| rinpol | 725.00 | | NIST Webbook |
| rinpol | 720.00 | | NIST Webbook |
| rinpol | 715.83 | | NIST Webbook |
| rinpol | 726.00 | | NIST Webbook |

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| rinpol | 721.00 | NIST Webbook |
| rinpol | 723.00 | NIST Webbook |
| rinpol | 726.00 | NIST Webbook |
| rinpol | 720.00 | NIST Webbook |
| rinpol | 720.00 | NIST Webbook |
| rinpol | 723.00 | NIST Webbook |
| rinpol | 724.00 | NIST Webbook |
| rinpol | 740.00 | NIST Webbook |
| rinpol | 734.70 | NIST Webbook |
| rinpol | 736.00 | NIST Webbook |
| rinpol | 728.00 | NIST Webbook |
| rinpol | 724.00 | NIST Webbook |
| rinpol | 706.00 | NIST Webbook |
| rinpol | 705.00 | NIST Webbook |
| rinpol | 703.00 | NIST Webbook |
| rinpol | 727.00 | NIST Webbook |
| rinpol | 727.00 | NIST Webbook |
| rinpol | 724.00 | NIST Webbook |
| rinpol | 726.00 | NIST Webbook |
| rinpol | 730.00 | NIST Webbook |
| rinpol | 722.00 | NIST Webbook |
| rinpol | 721.00 | NIST Webbook |
| rinpol | 720.00 | NIST Webbook |
| rinpol | 723.00 | NIST Webbook |
| rinpol | 721.70 | NIST Webbook |
| rinpol | 720.65 | NIST Webbook |
| rinpol | 720.12 | NIST Webbook |
| rinpol | 719.78 | NIST Webbook |
| rinpol | 722.94 | NIST Webbook |
| rinpol | 721.20 | NIST Webbook |
| rinpol | 720.00 | NIST Webbook |
| rinpol | 723.00 | NIST Webbook |
| ripol | 1039.50 | NIST Webbook |
| ripol | 994.00 | NIST Webbook |
| ripol | 1059.00 | NIST Webbook |
| ripol | 1010.00 | NIST Webbook |
| ripol | 1059.00 | NIST Webbook |
| ripol | 1021.20 | NIST Webbook |
| ripol | 1012.00 | NIST Webbook |
| ripol | 1009.00 | NIST Webbook |
| ripol | 1010.00 | NIST Webbook |
| ripol | 1010.00 | NIST Webbook |
| ripol | 1010.00 | NIST Webbook |
| ripol | 1008.00 | NIST Webbook |

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| ripol | 999.00 | | NIST Webbook |
| ripol | 1010.00 | | NIST Webbook |
| ripol | 1028.00 | | NIST Webbook |
| ripol | 1013.00 | | NIST Webbook |
| ripol | 1006.00 | | NIST Webbook |
| ripol | 1008.00 | | NIST Webbook |
| ripol | 1013.00 | | NIST Webbook |
| ripol | 1000.00 | | NIST Webbook |
| ripol | 1020.00 | | NIST Webbook |
| ripol | 1000.00 | | NIST Webbook |
| ripol | 1000.00 | | NIST Webbook |
| ripol | 1007.00 | | NIST Webbook |
| ripol | 1000.00 | | NIST Webbook |
| ripol | 1007.00 | | NIST Webbook |
| ripol | 1008.00 | | NIST Webbook |
| ripol | 1008.00 | | NIST Webbook |
| ripol | 1017.00 | | NIST Webbook |
| ripol | 1008.00 | | NIST Webbook |
| ripol | 999.00 | | NIST Webbook |
| ripol | 1017.00 | | NIST Webbook |
| ripol | 1025.00 | | NIST Webbook |
| ripol | 1002.00 | | NIST Webbook |
| ripol | 1000.00 | | NIST Webbook |
| ripol | 1012.00 | | NIST Webbook |
| ripol | 1015.00 | | NIST Webbook |
| ripol | 1034.00 | | NIST Webbook |
| ripol | 1033.90 | | NIST Webbook |
| ripol | 1029.00 | | NIST Webbook |
| ripol | 1025.20 | | NIST Webbook |
| ripol | 1019.00 | | NIST Webbook |
| ripol | 1007.00 | | NIST Webbook |
| tb | 389.60 | K | KDB |
| tb | 389.45 | K | Measurements of Quaternary Liquid-Liquid Equilibrium for Water + Acetic Acid + Propionic Acid + Solvent (Butyronitrile, Benzyl Acetate, or Methyl Isobutyl Ketone) at 298.15 K |
| tb | 389.15 | K | Vapor-Liquid Equilibrium for Binary of 1-Butanol + N,N-Dimethylacetamide and Methyl Isobutyl Ketone + N,N-Dimethylacetamide at 101.3 kPa |

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|-----|---------------|----------------------|---|
| tb | 390.54 | K | Excess enthalpies and (vapour + liquid) equilibrium data for the binary mixtures of dimethylsulphoxide with ketones |
| tb | 390.50 | K | Solubility and tie-line data for ternary aqueous mixtures of cyclopentanol with organic solvents at T = 298.2 K: Experiments and NRTL model |
| tb | 392.30 | K | Liquid-liquid equilibria of water + lactic acid + methyl isobutyl ketone |
| tb | 387.35 | K | Conductivity and Dissociation Constants of Quaternary Ammonium Perchlorates and Picrates in 4-Methyl-pentan-2-one |
| tc | 571.00 | K | KDB |
| tc | 575.50 ± 0.50 | K | NIST Webbook |
| tc | 574.60 ± 0.50 | K | NIST Webbook |
| tc | 571.00 | K | NIST Webbook |
| tc | 571.00 ± 1.11 | K | NIST Webbook |
| tf | 189.00 | K | KDB |
| tf | 189.15 | K | NIST Webbook |
| vc | 0.371 | m ³ /kmol | Joback Method |
| zra | 0.26 | | KDB |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|---------------|---------|-----------------|---------------|
| cpg | 182.26 ± 0.27 | J/mol×K | 399.44 | NIST Webbook |
| cpg | 187.90 ± 0.28 | J/mol×K | 415.75 | NIST Webbook |
| cpg | 180.50 ± 0.27 | J/mol×K | 394.30 | NIST Webbook |
| cpg | 184.31 ± 0.28 | J/mol×K | 405.15 | NIST Webbook |
| cpg | 186.06 ± 0.28 | J/mol×K | 410.70 | NIST Webbook |
| cpl | 211.90 | J/mol×K | 298.15 | NIST Webbook |
| dvisc | 0.0013273 | Paxs | 258.24 | Joback Method |
| dvisc | 0.0061867 | Paxs | 192.31 | Joback Method |
| dvisc | 0.0005326 | Paxs | 324.18 | Joback Method |
| dvisc | 0.0002910 | Paxs | 390.11 | Joback Method |
| dvisc | 0.0025603 | Paxs | 225.28 | Joback Method |
| dvisc | 0.0007984 | Paxs | 291.21 | Joback Method |
| dvisc | 0.0003828 | Paxs | 357.14 | Joback Method |
| hvapt | 37.60 | kJ/mol | 347.00 | NIST Webbook |

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|-------|--------------|--------|--------|---|
| hvapt | 37.00 | kJ/mol | 369.00 | NIST Webbook |
| hvapt | 40.61 | kJ/mol | 388.90 | NIST Webbook |
| hvapt | 42.50 | kJ/mol | 340.50 | NIST Webbook |
| hvapt | 39.20 | kJ/mol | 362.50 | NIST Webbook |
| hvapt | 38.00 ± 0.10 | kJ/mol | 338.00 | NIST Webbook |
| hvapt | 39.00 ± 0.10 | kJ/mol | 323.00 | NIST Webbook |
| hvapt | 40.10 ± 0.10 | kJ/mol | 308.00 | NIST Webbook |
| hvapt | 38.70 | kJ/mol | 359.00 | NIST Webbook |
| hvapt | 34.49 | kJ/mol | 389.40 | NIST Webbook |
| hvapt | 37.40 ± 0.10 | kJ/mol | 348.00 | NIST Webbook |
| hvapt | 41.20 | kJ/mol | 342.00 | NIST Webbook |
| pvap | 45.19 | kPa | 363.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 62.78 | kPa | 373.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 85.44 | kPa | 383.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 114.12 | kPa | 393.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |

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|------|--------|-----|--------|--|
| pvap | 101.30 | kPa | 389.15 | Vapor-Liquid Equilibrium for Binary of 1-Butanol + N,N-Dimethylacetamide and Methyl Isobutyl Ketone + N,N-Dimethylacetamide at 101.3 kPa |
| pvap | 19.35 | kPa | 340.18 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 19.78 | kPa | 340.66 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 21.92 | kPa | 343.42 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 30.01 | kPa | 351.55 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|-------|-----|--------|--|
| pvap | 31.12 | kPa | 352.71 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 31.71 | kPa | 353.11 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 39.35 | kPa | 359.22 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 39.63 | kPa | 359.39 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 31.80 | kPa | 353.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |

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|------|-------|-----|--------|--|
| pvap | 44.70 | kPa | 362.88 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 49.68 | kPa | 365.90 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 50.66 | kPa | 366.61 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 53.01 | kPa | 368.06 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 53.42 | kPa | 368.07 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|-------|-----|--------|--|
| pvap | 53.26 | kPa | 368.14 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 53.24 | kPa | 368.15 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 54.29 | kPa | 368.70 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 59.43 | kPa | 371.34 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|-------|-----|--------|--|
| pvap | 59.75 | kPa | 371.64 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 60.19 | kPa | 371.91 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 65.18 | kPa | 374.37 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 69.16 | kPa | 376.26 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 69.98 | kPa | 376.49 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|-------|-----|--------|--|
| pvap | 74.83 | kPa | 378.80 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 79.56 | kPa | 380.65 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 80.16 | kPa | 381.06 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 84.16 | kPa | 382.66 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|--------|-----|--------|--|
| pvap | 90.58 | kPa | 384.99 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 98.70 | kPa | 388.07 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 99.40 | kPa | 388.31 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 100.35 | kPa | 388.63 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 100.41 | kPa | 388.65 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |

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|------|--------|-----|--------|--|
| pvap | 101.85 | kPa | 389.06 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 102.78 | kPa | 389.49 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 21.82 | kPa | 343.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 14.56 | kPa | 333.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 9.42 | kPa | 323.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |

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|------|--------|-----|--------|---|
| pvap | 5.88 | kPa | 313.15 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 110.74 | kPa | 392.07 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 82.62 | kPa | 382.04 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 60.56 | kPa | 372.03 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 43.51 | kPa | 362.04 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |

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|------|-------|-----|--------|--|
| pvap | 30.29 | kPa | 351.81 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 13.85 | kPa | 331.98 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |
| pvap | 3.89 | kPa | 303.15 | Density, viscosity, isothermal (vapour + liquid) equilibrium, excess molar volume, viscosity deviation, and their correlations for chloroform + methyl isobutyl ketone binary system |
| pvap | 40.05 | kPa | 359.58 | Vapor Liquid Equilibrium, Excess Molar Enthalpies, and Excess Molar Volumes of Binary Mixtures Containing Methyl Isobutyl Ketone (MIBK) and 2-Butanol, tert-Pentanol, or 2-Ethyl-1-hexanol |
| pvap | 20.72 | kPa | 341.81 | Phase equilibrium properties of binary mixtures containing 2,5-dimethylfuran and furfuryl alcohol or methyl isobutyl ketone at several temperatures |

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|-----|---------|--------|--|
| rfi | 1.39355 | 298.15 | Isobaric vapour liquid equilibria for the binary systems 4-methyl-2-pentanone + 1-butanol and + 2-butanol at 20 and 101.3 kPa |
| rfi | 1.39327 | 298.15 | Ternary and Binary LLE Measurements for Solvent (4-Methyl-2-pentanone and 2-Methyl-2-butanol) + Furfural + Water between 298 and 401 K |
| rfi | 1.39586 | 293.15 | Vapor Liquid Equilibrium for Methyl Isobutyl Ketone (MIBK) + (1-Propanol or 2-Propanol) Binary Mixtures |
| rfi | 1.39420 | 298.15 | Isobaric Vapor-Liquid Equilibria for Binary and Ternary Mixtures with Cyclohexane, Cyclohexene, and Methyl Isobutyl Ketone at 100 kPa |
| rfi | 1.39360 | 298.15 | Liquid-Liquid and Vapor-Liquid-Liquid Equilibrium of the 4-Methyl-2-pentanone + 2-Butanol + Water System |
| rfi | 1.39350 | 298.15 | Excess molar volumes and ultrasonic studies of N-methyl-2-pyrrolidone with ketones at T = 303.15 K |
| rfi | 1.39360 | 298.15 | Bubble temperature measurements on seven binary mixtures formed by ethylbenzene at 94.7 kPa |

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|------|--------|-------|--------|--|
| rho1 | 781.11 | kg/m3 | 313.20 | Liquid-liquid equilibrium data and thermophysical properties for ternary systems composed of water, acetic acid and different solvents |
| rho1 | 800.80 | kg/m3 | 293.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 796.10 | kg/m3 | 298.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 791.60 | kg/m3 | 303.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 796.19 | kg/m3 | 298.15 | Excess molar enthalpies of methyl isobutyl ketone (MIBK) with alkan-1-ols (C1-C6) and their correlations at 298.15 K |
| rho1 | 782.30 | kg/m3 | 313.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 777.60 | kg/m3 | 318.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 773.00 | kg/m3 | 323.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |
| rho1 | 796.03 | kg/m3 | 298.15 | Evaluation of Diethyl Carbonate and Methyl Isobutyl Ketone as Entrainers for the Separation of 1-Hexene and n-Hexane |

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|------|--------|-------|--------|---|
| rho1 | 805.12 | kg/m3 | 288.15 | Thermal and Volumetric Properties of Some C5 and C6 Alkanones at Infinite Dilution in Water |
| rho1 | 795.98 | kg/m3 | 298.15 | Thermal and Volumetric Properties of Some C5 and C6 Alkanones at Infinite Dilution in Water |
| rho1 | 786.75 | kg/m3 | 308.15 | Thermal and Volumetric Properties of Some C5 and C6 Alkanones at Infinite Dilution in Water |
| rho1 | 777.46 | kg/m3 | 318.15 | Thermal and Volumetric Properties of Some C5 and C6 Alkanones at Infinite Dilution in Water |
| rho1 | 800.59 | kg/m3 | 298.15 | Liquid-Liquid Equilibrium for Ternary Systems, Water + 5-Hydroxymethylfurfural + (1-Butanol, Isobutanol, Methyl Isobutyl Ketone), at 313.15, 323.15, and 333.15 K |
| rho1 | 798.09 | kg/m3 | 298.15 | Evaluation of the Performance of Four Solvents for the Liquid Liquid Extraction of Acrylic Acid from Water |
| rho1 | 799.00 | kg/m3 | 298.15 | Liquid Liquid Equilibria for the Ternary System Methyl Isobutyl Ketone + 1,2-Benzenediol + Water |
| rho1 | 796.33 | kg/m3 | 303.15 | Excess Molar Enthalpies and Vapor-Liquid Equilibrium for N-Methyl-2-pyrrolidone with Ketones |

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|-----|--------|-------------------|--------|---|
| rho | 800.90 | kg/m ³ | 293.15 | Effect of 1-ethyl-3-methylimidazolium tetrafluoroborate on the phase equilibria for systems containing 5-hydroxymethylfurfural, water, organic solvent in the absence and presence of sodium chloride |
| rho | 799.61 | kg/m ³ | 293.20 | Liquid-liquid equilibrium data and thermophysical properties for ternary systems composed of water, acetic acid and different solvents |
| rho | 800.00 | kg/m ³ | 293.15 | Thermophysical approach to understand the nature of molecular interactions and structural factor between methyl isobutyl ketone and organic solvents mixtures |
| rho | 795.94 | kg/m ³ | 298.15 | Liquid liquid equilibria of 4-methyl-2-pentanone + 1-propanol or 2-propanol + water ternary systems: Measurements and correlation at different temperatures |
| rho | 796.23 | kg/m ³ | 298.15 | Liquid-liquid equilibria for the pseudo-ternary system {aqueous sulfuric acid solution + methyl ethyl ketone or methyl isopropyl ketone + phosphonium-based ionic liquids} at 298.15 K and atmospheric pressure |

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|------|--------|-------------------|--------|---|
| rhoI | 799.80 | kg/m ³ | 298.15 | Liquid liquid equilibria for the quaternary system methyl isobutyl ketone water phenol hydroquinone |
| rhoI | 796.50 | kg/m ³ | 298.15 | Isothermal vapour liquid equilibria in the binary and ternary systems composed of 2-propanol, diisopropyl ether and 4-methyl-2-pentanone |
| rhoI | 801.00 | kg/m ³ | 293.00 | KDB |
| rhoI | 782.00 | kg/m ³ | 313.15 | Thermophysical approach to understand the nature of molecular interactions and structural factor between methyl isobutyl ketone and organic solvents mixtures |
| rhoI | 792.00 | kg/m ³ | 303.15 | Thermophysical approach to understand the nature of molecular interactions and structural factor between methyl isobutyl ketone and organic solvents mixtures |
| rhoI | 801.00 | kg/m ³ | 293.15 | Thermophysical approach to understand the nature of molecular interactions and structural factor between methyl isobutyl ketone and organic solvents mixtures |
| rhoI | 791.25 | kg/m ³ | 303.15 | Excess molar volumes and ultrasonic studies of dimethylsulphoxide with ketones at T = 303.15 K |
| rhoI | 786.90 | kg/m ³ | 308.15 | Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model |

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|---------|---------|-----|--------|---|
| speedsl | 1138.00 | m/s | 313.15 | Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-1,1-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K |
| speedsl | 1175.00 | m/s | 303.15 | Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-1,1-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K |
| speedsl | 1156.00 | m/s | 308.15 | Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-1,1-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K |

Correlations

| Information | Value |
|-----------------------------|-------------------------------|
| Property code | pvap |
| Equation | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A | 1.49712e+01 |
| Coeff. B | -3.51652e+03 |
| Coeff. C | -4.93340e+01 |
| Temperature range (K), min. | 288.82 |
| Temperature range (K), max. | 413.37 |

Information

Value

| | |
|-----------------------------|--|
| Property code | pvap |
| Equation | $\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$ |
| Coeff. A | 1.58031e+02 |
| Coeff. B | -1.05457e+04 |
| Coeff. C | -2.16516e+01 |
| Coeff. D | 1.85635e-05 |
| Temperature range (K), min. | 295.15 |
| Temperature range (K), max. | 389.15 |

Datasets

Viscosity, Pa*s

| Temperature, K - Liquid | Pressure, kPa - Liquid | Viscosity, Pa*s - Liquid |
|-------------------------|------------------------|--------------------------|
| 308.15 | 101.30 | 0.0004550 |

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Thermal and Volumetric Properties of Some C5 and C6 Alkanones at Infinite Dilution in Water: Densities, Excess Molar Volumes and Ultrasonic Studies of Dimethylsulphoxide with Excess Molar Volume and Ultrasonic Studies of N-Methyl-2-pyrrolidone with Viscosity of the 0.1 M Phosphate + Methyl Isobutyl Ketone + Phosphoric Acid System

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Legend

- af: Acentric Factor
- aght: Autoignition Temperature
- chs: Standard solid enthalpy of combustion
- cpg: Ideal gas heat capacity
- cpl: Liquid phase heat capacity

| | |
|-----------------|--|
| dm: | Dipole Moment |
| dvisc: | Dynamic viscosity |
| fill: | Lower Flammability Limit |
| flu: | Upper Flammability Limit |
| fpc: | Flash Point (Closed Cup Method) |
| fpo: | Flash Point (Open Cup Method) |
| gf: | Standard Gibbs free energy of formation |
| gyrad: | Radius of Gyration |
| hf: | Enthalpy of formation at standard conditions |
| hfs: | Solid 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 |
| ie: | Ionization energy |
| log10ws: | Log10 of Water solubility in mol/l |
| logp: | Octanol/Water partition coefficient |
| mcvol: | McGowan's characteristic volume |
| nfpaf: | NFPA Fire Rating |
| nfpah: | NFPA Health Rating |
| pc: | Critical Pressure |
| pvap: | Vapor pressure |
| rfi: | Refractive Index |
| rho: | Liquid Density |
| rinpol: | Non-polar retention indices |
| ripol: | Polar retention indices |
| speedsl: | Speed of sound in fluid |
| tb: | Normal Boiling Point Temperature |
| tc: | Critical Temperature |
| tf: | Normal melting (fusion) point |
| vc: | Critical Volume |
| zra: | Rackett Parameter |

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