

# 1-Propanol, 2-amino-2-methyl-

|                      |                                               |
|----------------------|-----------------------------------------------|
| Other names:         | 1,1-Dimethyl-2-hydroxyethylamine              |
|                      | 2,2-Dimethyl-ethanolamine                     |
|                      | 2-Amino-1-hydroxy-2-methylpropane             |
|                      | 2-Amino-2,2-dimethylethanol                   |
|                      | 2-Amino-2-methyl-1-propanol                   |
|                      | 2-Amino-2-methylpropan-1-ol                   |
|                      | 2-Amino-2-methylpropanol                      |
|                      | 2-Aminodimethylethanol                        |
|                      | 2-Aminoisobutanol                             |
|                      | 2-Hydroxymethyl-2-propylamine                 |
|                      | 2-Methyl-2-aminopropanol                      |
|                      | 2-Methyl-2-aminopropanol-1                    |
|                      | AMP                                           |
|                      | AMP (thinner)                                 |
|                      | AMP 75                                        |
|                      | AMP Regular                                   |
|                      | AMP-95                                        |
|                      | Amino-2,2-dimethylethanol                     |
|                      | Amino-2-methyl-1-propanol                     |
|                      | Aminoisobutanol                               |
|                      | Aminomethylpropanol                           |
|                      | Corrguard 75                                  |
|                      | Hydroxy-tert-butylamine                       |
|                      | Hydroxymethyl-2-propylamine                   |
|                      | Isobutanol-2-amine                            |
|                      | KV 5088                                       |
|                      | NSC 441                                       |
|                      | «beta»-Aminoisobutanol                        |
|                      | Â«betaÂ»-Aminoisobutanol                      |
| Inchi:               | InChI=1S/C4H11NO/c1-4(2,5)3-6/h6H,3,5H2,1-2H3 |
| InchiKey:            | CBTVGIZVANVGBH-UHFFFAOYSA-N                   |
| Formula:             | C4H11NO                                       |
| SMILES:              | CC(C)(N)CO                                    |
| Mol. weight [g/mol]: | 89.14                                         |
| CAS:                 | 124-68-5                                      |

## Physical Properties

| Property code | Value         | Unit                 | Source                                                                                                           |
|---------------|---------------|----------------------|------------------------------------------------------------------------------------------------------------------|
| gf            | -84.73        | kJ/mol               | Joback Method                                                                                                    |
| hf            | -253.08       | kJ/mol               | Joback Method                                                                                                    |
| hfus          | 7.99          | kJ/mol               | Joback Method                                                                                                    |
| hvap          | 50.52         | kJ/mol               | Joback Method                                                                                                    |
| log10ws       | -0.31         |                      | Crippen Method                                                                                                   |
| logp          | -0.284        |                      | Crippen Method                                                                                                   |
| mcvol         | 83.070        | ml/mol               | McGowan Method                                                                                                   |
| pc            | 4862.97       | kPa                  | Joback Method                                                                                                    |
| ripol         | 1384.00       |                      | NIST Webbook                                                                                                     |
| ripol         | 1468.00       |                      | NIST Webbook                                                                                                     |
| ripol         | 1452.00       |                      | NIST Webbook                                                                                                     |
| ripol         | 1468.00       |                      | NIST Webbook                                                                                                     |
| ripol         | 1460.00       |                      | NIST Webbook                                                                                                     |
| ripol         | 1380.00       |                      | NIST Webbook                                                                                                     |
| tb            | 438.00        | K                    | NIST Webbook                                                                                                     |
| tb            | 438.70        | K                    | NIST Webbook                                                                                                     |
| tb            | 436.85        | K                    | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |
| tc            | 639.25        | K                    | Joback Method                                                                                                    |
| tf            | 303.50 ± 0.50 | K                    | NIST Webbook                                                                                                     |
| tt            | 295.75        | K                    | Solid Solubility in the Aqueous 2-Amino-2-methyl-propanol (AMP) Plus Piperazine (PZ) System                      |
| vc            | 0.296         | m <sup>3</sup> /kmol | Joback Method                                                                                                    |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 227.82 | J/mol×K | 639.25          | Joback Method |
| cpg           | 191.22 | J/mol×K | 483.54          | Joback Method |
| cpg           | 199.43 | J/mol×K | 514.68          | Joback Method |
| cpg           | 207.16 | J/mol×K | 545.82          | Joback Method |
| cpg           | 214.46 | J/mol×K | 576.96          | Joback Method |
| cpg           | 221.34 | J/mol×K | 608.11          | Joback Method |
| cpg           | 182.53 | J/mol×K | 452.40          | Joback Method |
| cpl           | 229.50 | J/mol×K | 298.15          | NIST Webbook  |

|       |           |      |        |                                                                                                                  |  |
|-------|-----------|------|--------|------------------------------------------------------------------------------------------------------------------|--|
| dvisc | 0.0089100 | Pa×s | 343.15 | Volumetric Properties and Viscosities for Aqueous AMP Solutions from 25 0C to 70 0C                              |  |
| dvisc | 0.0478000 | Pa×s | 313.15 | Volumetric Properties and Viscosities for Aqueous AMP Solutions from 25 0C to 70 0C                              |  |
| dvisc | 0.0251000 | Pa×s | 323.15 | Volumetric Properties and Viscosities for Aqueous AMP Solutions from 25 0C to 70 0C                              |  |
| dvisc | 0.0144000 | Pa×s | 333.15 | Volumetric Properties and Viscosities for Aqueous AMP Solutions from 25 0C to 70 0C                              |  |
| pvap  | 160.00    | kPa  | 452.00 | Vapor Pressures of Several Commercially Used Alkanolamines                                                       |  |
| pvap  | 12.00     | kPa  | 381.35 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap  | 16.00     | kPa  | 388.05 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap  | 20.00     | kPa  | 393.05 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap  | 24.00     | kPa  | 397.25 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |

|      |       |     |        |                                                                                                                  |  |
|------|-------|-----|--------|------------------------------------------------------------------------------------------------------------------|--|
| pvap | 28.00 | kPa | 401.05 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 32.00 | kPa | 404.45 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 36.00 | kPa | 407.75 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 40.00 | kPa | 410.35 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 44.00 | kPa | 412.95 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 48.00 | kPa | 415.15 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 50.70 | kPa | 416.65 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |

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|------|-------|-----|--------|------------------------------------------------------------------------------------------------------------------|--|
| pvap | 53.30 | kPa | 418.15 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 57.30 | kPa | 419.95 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 61.30 | kPa | 421.85 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 65.30 | kPa | 423.65 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 66.70 | kPa | 424.45 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 69.30 | kPa | 425.55 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |
| pvap | 73.30 | kPa | 427.15 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions |  |

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|------|--------|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| pvap | 80.00  | kPa | 429.65 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 80.00  | kPa | 429.75 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 85.30  | kPa | 431.85 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 90.70  | kPa | 433.65 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 96.00  | kPa | 435.35 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 101.30 | kPa | 436.85 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |  |
| pvap | 0.04   | kPa | 293.29 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |  |

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|------|------|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pvap | 0.10 | kPa | 303.35 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 0.22 | kPa | 313.24 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 0.46 | kPa | 323.25 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 0.87 | kPa | 332.57 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 1.66 | kPa | 343.18 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |

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|------|-------|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pvap | 2.93  | kPa | 353.17 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 4.99  | kPa | 363.10 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| pvap | 8.00  | kPa | 373.25 | Measurement and thermodynamic modeling of the phase equilibrium of aqueous 2-amino-2-methyl-1-propanol solutions                                                                                 |
| pvap | 5.00  | kPa | 364.11 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems                                                 |
| pvap | 10.00 | kPa | 377.39 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems                                                 |
| pvap | 20.00 | kPa | 392.71 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems                                                 |



|      |       |     |        |                                                                                                                                                  |
|------|-------|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| pvap | 30.00 | kPa | 402.56 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems |
| pvap | 50.00 | kPa | 415.99 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems |
| pvap | 70.00 | kPa | 425.48 | Ternary Isobaric Vapor-Liquid Equilibria of Methanol + N-Methyldiethanolamine + Water and Methanol + 2-Amino-2-methyl-1-propanol + Water Systems |
| pvap | 1.94  | kPa | 347.50 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 2.94  | kPa | 354.30 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 4.94  | kPa | 363.60 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 7.44  | kPa | 371.40 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 9.94  | kPa | 377.20 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 19.90 | kPa | 392.30 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |
| pvap | 29.90 | kPa | 402.10 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                       |

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|------|--------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pvap | 39.90  | kPa   | 409.50 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 49.90  | kPa   | 415.60 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 65.00  | kPa   | 423.00 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 80.00  | kPa   | 429.20 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 100.00 | kPa   | 436.20 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 120.00 | kPa   | 442.10 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 140.00 | kPa   | 447.30 | Vapor Pressures of Several Commercially Used Alkanolamines                                                                                                                                       |
| pvap | 8.14   | kPa   | 373.00 | Investigation of the isothermal (vapour + liquid) equilibria of aqueous 2-amino-2-methyl-1-propanol (AMP), N-benzylethanolamine, or 3-dimethylamino-1-propanol solutions at several temperatures |
| rhoI | 917.20 | kg/m3 | 313.15 | Density and Viscosity of Aqueous Blends of Three Alkanolamines: N-Methyldiethanolamine, Diethanolamine, and 2-Amino-2-methyl-1-propanol in the Range of (303 to 343) K                           |

|      |        |       |        |                                                                                                                                                                                                                                |
|------|--------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rhoI | 909.20 | kg/m3 | 323.15 | Density and Viscosity of Aqueous Blends of Three Alkanolamines: N-Methyldiethanolamine, Diethanolamine, and 2-Amino-2-methyl-1-propanol in the Range of (303 to 343) K                                                         |
| rhoI | 900.70 | kg/m3 | 333.15 | Density and Viscosity of Aqueous Blends of Three Alkanolamines: N-Methyldiethanolamine, Diethanolamine, and 2-Amino-2-methyl-1-propanol in the Range of (303 to 343) K                                                         |
| rhoI | 930.52 | kg/m3 | 298.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |
| rhoI | 926.40 | kg/m3 | 303.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |

|      |        |       |        |                                                                                                                                                                                                                                |
|------|--------|-------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rhoI | 922.26 | kg/m3 | 308.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |
| rhoI | 918.08 | kg/m3 | 313.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |
| rhoI | 913.87 | kg/m3 | 318.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |
| rhoI | 909.62 | kg/m3 | 323.15 | Densities and Viscosities of Aqueous Ternary Mixtures of 2-(Methylamino)ethanol and 2-(Ethylamino)ethanol with Diethanolamine, Triethanolamine, N-Methyldiethanolamine, or 2-Amino-1-methyl-1-propanol from 298.15 to 323.15 K |

|         |         |     |        |                                                                                                                                                                                                                                                             |
|---------|---------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speedsl | 1386.93 | m/s | 323.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K                        |
| speedsl | 1483.44 | m/s | 298.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |
| speedsl | 1501.44 | m/s | 293.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |

|         |         |     |        |                                                                                                                                                                                                                                                             |
|---------|---------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speedsl | 1442.40 | m/s | 308.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |
| speedsl | 1423.80 | m/s | 313.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |
| speedsl | 1405.28 | m/s | 318.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |

|         |         |     |        |                                                                                                                                                                                                                                                             |
|---------|---------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speedsl | 1386.93 | m/s | 323.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |
| speedsl | 1501.44 | m/s | 293.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K                        |
| speedsl | 1483.44 | m/s | 298.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K                        |

|         |         |     |        |                                                                                                                                                                                                                                      |
|---------|---------|-----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speedsl | 1461.22 | m/s | 303.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K |
| speedsl | 1442.40 | m/s | 308.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K |
| speedsl | 1423.80 | m/s | 313.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K |



|         |         |     |        |                                                                                                                                                                                                                                                             |
|---------|---------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| speedsl | 1405.28 | m/s | 318.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K                        |
| speedsl | 1461.22 | m/s | 303.15 | Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (Monoethanolamine + 2-Amino-2-methyl-1-propanol), (Monoethanolamine + Triethanolamine), and (Monoethanolamine + N-Methyldiethanolamine) at Temperatures from (293.15 to 323.15) K |

Pressure Dependent Properties

| Property code | Value  | Unit | Pressure [kPa] | Source       |
|---------------|--------|------|----------------|--------------|
| tbrp          | 340.50 | K    | 1.30           | NIST Webbook |

Correlations

| Information   | Value                         |
|---------------|-------------------------------|
| Property code | pvap                          |
| Equation      | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A      | 1.61365e+01                   |
| Coeff. B      | -4.32398e+03                  |
| Coeff. C      | -6.30950e+01                  |

|                             |        |
|-----------------------------|--------|
| Temperature range (K), min. | 335.92 |
| Temperature range (K), max. | 462.54 |

Datasets

Mass density, kg/m3

| Temperature, K - Liquid | Pressure, kPa - Liquid | Mass density, kg/m3 - Liquid |
|-------------------------|------------------------|------------------------------|
| 313.06                  | 1000.00                | 931.4                        |
| 313.06                  | 2000.00                | 931.9                        |
| 313.06                  | 3000.00                | 932.4                        |
| 313.06                  | 4000.00                | 932.9                        |
| 313.06                  | 5000.00                | 933.5                        |
| 313.06                  | 6000.00                | 933.9                        |
| 313.06                  | 7000.00                | 934.5                        |
| 313.06                  | 8000.00                | 935.0                        |
| 313.06                  | 9007.00                | 935.5                        |
| 313.06                  | 10003.00               | 936.0                        |
| 313.06                  | 11000.00               | 936.6                        |
| 313.06                  | 12000.00               | 937.0                        |
| 313.06                  | 13000.00               | 937.6                        |
| 313.06                  | 14000.00               | 938.1                        |
| 313.06                  | 15002.00               | 938.6                        |
| 313.06                  | 16000.00               | 939.1                        |
| 313.06                  | 17001.00               | 939.7                        |
| 313.06                  | 18002.00               | 940.2                        |
| 313.06                  | 19000.00               | 940.6                        |
| 313.06                  | 20029.00               | 941.1                        |
| 313.06                  | 21004.00               | 941.7                        |
| 313.06                  | 22004.00               | 942.1                        |
| 313.06                  | 24004.00               | 943.1                        |
| 322.98                  | 500.00                 | 922.7                        |
| 322.98                  | 1000.00                | 922.8                        |
| 322.98                  | 2000.00                | 923.4                        |
| 322.98                  | 3000.00                | 924.0                        |
| 322.98                  | 4000.00                | 924.5                        |
| 322.98                  | 5000.00                | 925.1                        |
| 322.98                  | 6000.00                | 925.7                        |
| 322.98                  | 7000.00                | 926.2                        |

|        |          |       |
|--------|----------|-------|
| 322.98 | 8000.00  | 926.8 |
| 322.98 | 9007.00  | 927.4 |
| 322.98 | 10002.00 | 927.8 |
| 322.98 | 11000.00 | 928.4 |
| 322.98 | 12000.00 | 928.9 |
| 322.98 | 13000.00 | 929.5 |
| 322.98 | 14000.00 | 930.1 |
| 322.98 | 15003.00 | 930.6 |
| 322.98 | 16006.00 | 931.1 |
| 322.98 | 17001.00 | 931.6 |
| 322.98 | 18002.00 | 932.1 |
| 322.98 | 19000.00 | 932.6 |
| 322.98 | 20030.00 | 933.2 |
| 322.98 | 21005.00 | 933.7 |
| 322.98 | 22004.00 | 934.1 |
| 322.98 | 24004.00 | 935.2 |
| 332.91 | 500.00   | 914.0 |
| 332.91 | 1000.00  | 914.4 |
| 332.91 | 2000.00  | 915.0 |
| 332.91 | 3000.00  | 915.6 |
| 332.91 | 4000.00  | 916.1 |
| 332.91 | 5000.00  | 916.7 |
| 332.91 | 6000.00  | 917.3 |
| 332.91 | 7000.00  | 918.0 |
| 332.91 | 8000.00  | 918.5 |
| 332.91 | 9009.00  | 919.1 |
| 332.91 | 10003.00 | 919.7 |
| 332.91 | 11002.00 | 920.2 |
| 332.91 | 12001.00 | 920.8 |
| 332.91 | 13000.00 | 921.3 |
| 332.91 | 14000.00 | 921.9 |
| 332.91 | 15002.00 | 922.4 |
| 332.91 | 16001.00 | 923.0 |
| 332.91 | 17001.00 | 923.5 |
| 332.91 | 18002.00 | 924.1 |
| 332.91 | 19000.00 | 924.6 |
| 332.91 | 20030.00 | 925.2 |
| 332.91 | 21002.00 | 925.6 |
| 332.91 | 22004.00 | 926.2 |
| 332.91 | 23000.00 | 926.7 |
| 332.91 | 24004.00 | 927.3 |
| 342.84 | 500.00   | 905.4 |
| 342.84 | 1000.00  | 905.7 |
| 342.84 | 2000.00  | 906.4 |

|        |          |       |
|--------|----------|-------|
| 342.84 | 3000.00  | 907.0 |
| 342.84 | 4000.00  | 907.6 |
| 342.84 | 5000.00  | 908.3 |
| 342.84 | 6000.00  | 908.9 |
| 342.84 | 7000.00  | 909.5 |
| 342.84 | 8001.00  | 910.1 |
| 342.84 | 9009.00  | 910.7 |
| 342.84 | 10003.00 | 911.3 |
| 342.84 | 11001.00 | 911.9 |
| 342.84 | 12000.00 | 912.5 |
| 342.84 | 13000.00 | 913.1 |
| 342.84 | 14000.00 | 913.6 |
| 342.84 | 15003.00 | 914.3 |
| 342.84 | 16001.00 | 914.8 |
| 342.84 | 17001.00 | 915.3 |
| 342.84 | 18002.00 | 915.9 |
| 342.84 | 19000.00 | 916.5 |
| 342.84 | 20030.00 | 917.1 |
| 342.84 | 21005.00 | 917.6 |
| 342.84 | 22004.00 | 918.1 |
| 342.84 | 23000.00 | 918.7 |
| 342.84 | 24004.00 | 919.2 |
| 352.79 | 500.00   | 896.8 |
| 352.79 | 1000.00  | 897.2 |
| 352.79 | 2000.00  | 897.9 |
| 352.79 | 3000.00  | 898.5 |
| 352.79 | 4001.00  | 899.2 |
| 352.79 | 5000.00  | 899.9 |
| 352.79 | 6000.00  | 900.5 |
| 352.79 | 7001.00  | 901.2 |
| 352.79 | 8000.00  | 901.8 |
| 352.79 | 9009.00  | 902.4 |
| 352.79 | 10003.00 | 903.1 |
| 352.79 | 11001.00 | 903.7 |
| 352.79 | 12000.00 | 904.3 |
| 352.79 | 13001.00 | 904.9 |
| 352.79 | 14000.00 | 905.5 |
| 352.79 | 15002.00 | 906.1 |
| 352.79 | 16001.00 | 906.7 |
| 352.79 | 17001.00 | 907.4 |
| 352.79 | 18002.00 | 907.9 |
| 352.79 | 18997.00 | 908.5 |
| 352.79 | 20030.00 | 909.1 |
| 352.79 | 21001.00 | 909.7 |

|        |          |       |
|--------|----------|-------|
| 352.79 | 22004.00 | 910.3 |
| 352.79 | 23000.00 | 910.9 |
| 352.79 | 24004.00 | 911.4 |
| 362.65 | 504.00   | 888.0 |
| 362.65 | 1002.00  | 888.4 |
| 362.65 | 2000.00  | 889.0 |
| 362.65 | 3000.00  | 889.7 |
| 362.65 | 4000.00  | 890.5 |
| 362.65 | 5000.00  | 891.2 |
| 362.65 | 6000.00  | 891.8 |
| 362.65 | 7000.00  | 892.5 |
| 362.65 | 8001.00  | 893.2 |
| 362.65 | 9010.00  | 893.9 |
| 362.65 | 10003.00 | 894.6 |
| 362.65 | 11001.00 | 895.2 |
| 362.65 | 12000.00 | 895.8 |
| 362.65 | 13001.00 | 896.5 |
| 362.65 | 14000.00 | 897.1 |
| 362.65 | 15003.00 | 897.8 |
| 362.65 | 16001.00 | 898.4 |
| 362.65 | 17000.00 | 899.1 |
| 362.65 | 18002.00 | 899.7 |
| 362.65 | 19000.00 | 900.3 |
| 362.65 | 20030.00 | 901.0 |
| 362.65 | 21004.00 | 901.6 |
| 362.65 | 22004.00 | 902.2 |
| 362.65 | 23000.00 | 902.8 |
| 362.65 | 24003.00 | 903.3 |

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|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>cpl:</b>     | Liquid phase heat capacity                      |
| <b>dvisc:</b>   | Dynamic viscosity                               |
| <b>gf:</b>      | Standard Gibbs free energy of formation         |
| <b>hf:</b>      | Enthalpy of formation at standard conditions    |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions       |
| <b>hvap:</b>    | Enthalpy of vaporization at standard conditions |
| <b>log10ws:</b> | Log10 of Water solubility in mol/l              |
| <b>logp:</b>    | Octanol/Water partition coefficient             |

|                 |                                   |
|-----------------|-----------------------------------|
| <b>mcvol:</b>   | McGowan's characteristic volume   |
| <b>pc:</b>      | Critical Pressure                 |
| <b>pvap:</b>    | Vapor pressure                    |
| <b>rho:</b>     | Liquid Density                    |
| <b>ripol:</b>   | Polar retention indices           |
| <b>speedsl:</b> | Speed of sound in fluid           |
| <b>tb:</b>      | Normal Boiling Point Temperature  |
| <b>tbrp:</b>    | Boiling point at reduced pressure |
| <b>tc:</b>      | Critical Temperature              |
| <b>tf:</b>      | Normal melting (fusion) point     |
| <b>tt:</b>      | Triple Point Temperature          |
| <b>vc:</b>      | Critical Volume                   |

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