# 1-Propanol, 2-amino-, (.+/-.)-

| | |
|---|---|
| **Other names:** | (.+/-.)-2-Amino-1-propanol |
| | (.+/-.)-Alaninol |
| | 1-Hydroxy-2-aminopropane |
| | 1-Methyl-2-hydroxyethylamine |
| | 1-Propanol, 2-amino- |
| | 1-Propanol, 2-amino-, DL- |
| | 2-Amino-1-propanol |
| | 2-Amino-2-methylethanol |
| | 2-Aminopropanol |
| | Alaninol |
| | DL-2-Amino-1-propanol |
| | DL-2-Aminopropanol |
| | DL-2-aminopropan-1-ol |
| | DL-Alaninol |
| | NSC 1360 |
| **Inchi:** | InChI=1S/C3H9NO/c1-3(4)2-5/h3,5H,2,4H2,1H3 |
| **InchiKey:** | BKMMTJMQCTUHRP-UHFFFAOYSA-N |
| **Formula:** | C3H9NO |
| **SMILES:** | CC(N)CO |
| **Mol. weight [g/mol]:** | 75.11 |
| **CAS:** | 6168-72-5 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -98.43 | kJ/mol | Joback Method |
| hf | -228.97 | kJ/mol | Joback Method |
| hfus | 9.29 | kJ/mol | Joback Method |
| hvap | 49.20 | kJ/mol | Joback Method |
| log10ws | 0.11 | | Crippen Method |
| logp | -0.674 | | Crippen Method |
| mcvol | 68.980 | ml/mol | McGowan Method |
| pc | 5495.11 | kPa | Joback Method |
| tb | 447.70 | K | NIST Webbook |
| tb | 448.00 | K | NIST Webbook |
| tc | 613.40 | K | Joback Method |
| tf | 252.65 | K | Joback Method |
| vc | 0.245 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 142.31 | J/mol×K | 432.31 | Joback Method |
| cpg | 149.06 | J/mol×K | 462.49 | Joback Method |
| cpg | 155.54 | J/mol×K | 492.67 | Joback Method |
| cpg | 161.74 | J/mol×K | 522.85 | Joback Method |
| cpg | 167.68 | J/mol×K | 553.03 | Joback Method |
| cpg | 173.36 | J/mol×K | 583.21 | Joback Method |
| cpg | 178.78 | J/mol×K | 613.40 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 2.33125e+01 |
| Coeff. B | -6.38392e+03 |
| Coeff. C | -6.54580e+01 |
| Temperature range (K), min. | 342.72 |
| Temperature range (K), max. | 420.10 |

# Sources

**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws

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

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

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C6168725&Units=SI

**The Yaws Handbook of Vapor Pressure:** https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# Legend

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **pvap:** | Vapor pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |