# 2-Pentanamine

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|---|---|
| **Other names:** | (±)-1-methylbutylamine |
| | (Â±)-1-methylbutylamine |
| | 1-Methyl-n-butylamine |
| | 1-Methylbutylamine |
| | 2-Aminopentane |
| | 2-Amylamine |
| | 2-Pentanamine, (.+/-.)- |
| | 2-Pentylamine |
| | Butylamine, 1-methyl- |
| | DL-2-Aminopentane |
| | NSC 6367 |
| | sec-Amylamine |
| | «alpha»-Methylbutylamine |
| | Â«alphaÂ»-Methylbutylamine |
| **Inchi:** | InChI=1S/C5H13N/c1-3-4-5(2)6/h5H,3-4,6H2,1-2H3 |
| **InchiKey:** | IGEIPFLJVCPEKU-UHFFFAOYSA-N |
| **Formula:** | C5H13N |
| **SMILES:** | CCCC(C)N |
| **Mol. weight [g/mol]:** | 87.16 |
| **CAS:** | 63493-28-7 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 55.23 | kJ/mol | Joback Method |
| hf | -118.02 | kJ/mol | Joback Method |
| hfus | 10.38 | kJ/mol | Joback Method |
| hvap | 36.98 | kJ/mol | Joback Method |
| log10ws | -1.46 | | Crippen Method |
| logp | 1.134 | | Crippen Method |
| mcvol | 91.290 | ml/mol | McGowan Method |
| pc | 3749.97 | kPa | Joback Method |
| tb | 385.89 | K | Joback Method |
| tc | 571.20 | K | Joback Method |
| tf | 214.37 | K | Joback Method |
| vc | 0.339 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 173.57 | J/mol×K | 385.89 | Joback Method |
| cpg | 184.03 | J/mol×K | 416.77 | Joback Method |
| cpg | 194.06 | J/mol×K | 447.66 | Joback Method |
| cpg | 203.68 | J/mol×K | 478.54 | Joback Method |
| cpg | 212.89 | J/mol×K | 509.43 | Joback Method |
| cpg | 221.72 | J/mol×K | 540.31 | Joback Method |
| cpg | 230.17 | J/mol×K | 571.20 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.40749e+01 |
| Coeff. B | -2.65083e+03 |
| Coeff. C | -8.38820e+01 |
| Temperature range (K), min. | 276.15 |
| Temperature range (K), max. | 386.37 |

# 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=C63493287&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 |