# 1,6-Hexanediamine, N,N'-dimethyl-

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|---|---|
| **Other names:** | N,N'-Dimethyl-1,6-diaminohexane |
| | N,N'-Dimethyl-1,6-hexanediamine |
| | N,N'-Dimethylhexamethylenediamine |
| | N,N'-dimethylhexane-1,6-diamine |
| **Inchi:** | InChI=1S/C8H20N2/c1-9-7-5-3-4-6-8-10-2/h9-10H,3-8H2,1-2H3 |
| **InchiKey:** | MDKQJOKKKZNQDG-UHFFFAOYSA-N |
| **Formula:** | C8H20N2 |
| **SMILES:** | CNCCCCCCNC |
| **Mol. weight [g/mol]:** | 144.26 |
| **CAS:** | 13093-04-4 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 195.26 | kJ/mol | Joback Method |
| hf | -101.51 | kJ/mol | Joback Method |
| hfus | 26.67 | kJ/mol | Joback Method |
| hvap | 46.27 | kJ/mol | Joback Method |
| log10ws | -1.55 | | Crippen Method |
| logp | 0.986 | | Crippen Method |
| mcvol | 143.540 | ml/mol | McGowan Method |
| pc | 2603.08 | kPa | Joback Method |
| tb | 482.78 | K | Joback Method |
| tc | 654.76 | K | Joback Method |
| tf | 285.24 | K | Joback Method |
| vc | 0.553 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 328.81 | J/mol×K | 482.78 | Joback Method |
| cpg | 342.81 | J/mol×K | 511.44 | Joback Method |
| cpg | 356.24 | J/mol×K | 540.11 | Joback Method |
| cpg | 369.11 | J/mol×K | 568.77 | Joback Method |
| cpg | 381.45 | J/mol×K | 597.43 | Joback Method |

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|---|---|---|---|---|
| cpg | 393.25 | J/mol×K | 626.10 | Joback Method |
| cpg | 404.54 | J/mol×K | 654.76 | Joback Method |

# Pressure Dependent Properties

| Property code | Value | Unit | Pressure [kPa] | Source |
|---|---|---|---|---|
| tbrp | 369.20 | K | 1.90 | NIST Webbook |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.18171e+01 |
| Coeff. B | -3.06135e+03 |
| Coeff. C | -6.08030e+01 |
| Temperature range (K), min. | 326.33 |
| Temperature range (K), max. | 531.37 |

# Sources

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

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C13093044&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

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

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

# Legend

**cpg:** Ideal gas heat capacity

**gf:** Standard Gibbs free energy of formation

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|---|---|
| **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 |
| **tbrp:** | Boiling point at reduced pressure |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |