# Cyclohexanamine, N,N-diethyl-

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|---|---|
| **Other names:** | Cyclohexylamine, N,N-diethyl- |
| | Cyclohexyldiethylamine |
| | Diethylcyclohexylamine |
| | N,N-Diethyl cyclohexyl amine |
| **Inchi:** | InChI=1S/C10H21N/c1-3-11(4-2)10-8-6-5-7-9-10/h10H,3-9H2,1-2H3 |
| **InchiKey:** | CIXSDMKDSYXUMJ-UHFFFAOYSA-N |
| **Formula:** | C10H21N |
| **SMILES:** | CCN(CC)C1CCCCC1 |
| **Mol. weight [g/mol]:** | 155.28 |
| **CAS:** | 91-65-6 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 168.55 | kJ/mol | Joback Method |
| hf | -127.88 | kJ/mol | Joback Method |
| hfus | 16.51 | kJ/mol | Joback Method |
| hvap | 40.33 | kJ/mol | Joback Method |
| log10ws | -2.58 | | Crippen Method |
| logp | 2.661 | | Crippen Method |
| mcvol | 150.880 | ml/mol | McGowan Method |
| pc | 2563.69 | kPa | Joback Method |
| rinpol | 1111.00 | | NIST Webbook |
| tb | 467.70 | K | NIST Webbook |
| tb | 473.15 ± 8.00 | K | NIST Webbook |
| tc | 654.64 | K | Joback Method |
| tf | 242.31 | K | Joback Method |
| vc | 0.546 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 333.58 | J/mol×K | 460.19 | Joback Method |
| cpg | 353.84 | J/mol×K | 492.60 | Joback Method |
| cpg | 373.08 | J/mol×K | 525.01 | Joback Method |

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|---|---|---|---|---|
| cpg | 391.34 | J/mol×K | 557.41 | Joback Method |
| cpg | 408.63 | J/mol×K | 589.82 | Joback Method |
| cpg | 425.01 | J/mol×K | 622.23 | Joback Method |
| cpg | 440.49 | J/mol×K | 654.64 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.43220e+01 |
| Coeff. B | -3.85466e+03 |
| Coeff. C | -7.04620e+01 |
| Temperature range (K), min. | 345.12 |
| Temperature range (K), max. | 498.26 |

# Sources

**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=C91656&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

# 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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |