# 2H-Indol-2-one, 1,3-dihydro-

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|---|---|
| **Other names:** | 1,3-Dihydroindol-2-one |
| | 2,3-Dihydroindole-2-one |
| | 2,3-dihydroindol-2-one |
| | 2-Indolinone |
| | 2-Oxindole |
| | 2-Oxindoline |
| | 2-Oxoindoline |
| | Indol-2(3H)-one |
| | NSC 274863 |
| | Oxindol |
| | indolin-2-one |
| | o-(Aminophenyl)-acetic acid lactam |
| | oxindole |
| **Inchi:** | InChI=1S/C8H7NO/c10-8-5-6-3-1-2-4-7(6)9-8/h1-4H,5H2,(H,9,10) |
| **InchiKey:** | JYGFTBXVXVMTGB-UHFFFAOYSA-N |
| **Formula:** | C8H7NO |
| **SMILES:** | O=C1Cc2ccccc2N1 |
| **Mol. weight [g/mol]:** | 133.15 |
| **CAS:** | 59-48-3 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 152.84 | kJ/mol | Joback Method |
| hf | 9.86 | kJ/mol | Joback Method |
| hfus | 16.29 | kJ/mol | Joback Method |
| hvap | 47.57 | kJ/mol | Joback Method |
| ie | 8.36 | eV | NIST Webbook |
| log10ws | -1.53 | | Crippen Method |
| logp | 1.181 | | Crippen Method |
| mcvol | 100.510 | ml/mol | McGowan Method |
| pc | 4775.98 | kPa | Joback Method |
| tb | 541.88 | K | Joback Method |
| tc | 796.73 | K | Joback Method |
| tf | 414.29 | K | Joback Method |
| tt | 393.93 | K | Solubility Measurement and Correlation of 2-Oxindole in 12 Pure Organic Solvents |

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|---|---|---|---|
| vc | 0.378 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 218.51 | J/mol×K | 541.88 | Joback Method |
| cpg | 230.99 | J/mol×K | 584.36 | Joback Method |
| cpg | 242.64 | J/mol×K | 626.83 | Joback Method |
| cpg | 253.49 | J/mol×K | 669.31 | Joback Method |
| cpg | 263.56 | J/mol×K | 711.78 | Joback Method |
| cpg | 272.90 | J/mol×K | 754.26 | Joback Method |
| cpg | 281.52 | J/mol×K | 796.73 | Joback Method |

# Pressure Dependent Properties

| Property code | Value | Unit | Pressure [kPa] | Source |
|---|---|---|---|---|
| tbrp | 500.20 | K | 9.70 | NIST Webbook |
| tbrp | 500.20 | K | 3.10 | NIST Webbook |

# Sources

**Solubility Measurement and Correlation of 2-Oxindole in 12 Pure Organic Solvents:** https://www.doi.org/10.1021/acs.jced.9b00308

**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=C59483&Units=SI

**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

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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 |
| **ie:** | Ionization energy |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tbrp:** | Boiling point at reduced pressure |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **tt:** | Triple Point Temperature |
| **vc:** | Critical Volume |