# Hydrazine, 1,1-diphenyl-

**Other names:** «alpha»,«alpha»-Diphenylhydrazine
N,N-Diphenylhydrazine
1,1-Diphenylhydrazine
**Inchi:** InChI=1S/C12H12N2/c13-14(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10H,13H2
**InchiKey:** YHYKLKNNBYLTQY-UHFFFAOYSA-N
**Formula:** C12H12N2
**SMILES:** NN(c1ccccc1)c1ccccc1
**Mol. weight [g/mol]:** 184.24
**CAS:** 530-50-7

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 452.21 | kJ/mol | Joback Method |
| hf | 283.37 | kJ/mol | Joback Method |
| hfus | 23.14 | kJ/mol | Joback Method |
| hvap | 59.54 | kJ/mol | Joback Method |
| log10ws | -3.18 | | Crippen Method |
| logp | 2.698 | | Crippen Method |
| mcvol | 152.380 | ml/mol | McGowan Method |
| pc | 3659.77 | kPa | Joback Method |
| rinpol | 1623.00 | | NIST Webbook |
| rinpol | 1623.00 | | NIST Webbook |
| tb | 612.29 | K | Joback Method |
| tc | 865.50 | K | Joback Method |
| tf | 393.57 | K | Joback Method |
| vc | 0.538 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 372.79 | J/mol×K | 612.29 | Joback Method |
| cpg | 388.67 | J/mol×K | 654.49 | Joback Method |
| cpg | 403.16 | J/mol×K | 696.69 | Joback Method |
| cpg | 416.34 | J/mol×K | 738.89 | Joback Method |

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|---|---|---|---|---|
| cpg | 428.33 | J/mol×K | 781.09 | Joback Method |
| cpg | 439.23 | J/mol×K | 823.30 | Joback Method |
| cpg | 449.15 | J/mol×K | 865.50 | Joback Method |
| hvapt | 68.80 | kJ/mol | 497.50 | NIST Webbook |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C530507&Units=SI |
| **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 |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |

# Legend

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|---|---|
| **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 |
| **hvapt:** | Enthalpy of vaporization at a given temperature |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |