# Hydrazine, 1,2-bis(1-methylethyl)-

**Other names:** 1,2-Diisopropylhydrazine
Hydrazine, 1,2-diisopropyl-
N,N'-Diisopropylhydrazine
**Inchi:** InChI=1S/C6H16N2/c1-5(2)7-8-6(3)4/h5-8H,1-4H3
**InchiKey:** QWLQTDXXEZQUBB-UHFFFAOYSA-N
**Formula:** C6H16N2
**SMILES:** CC(C)NNC(C)C
**Mol. weight [g/mol]:** 116.20
**CAS:** 3711-34-0

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 173.54 | kJ/mol | Joback Method |
| hf | -70.79 | kJ/mol | Joback Method |
| hfus | 14.45 | kJ/mol | Joback Method |
| hvap | 41.05 | kJ/mol | Joback Method |
| ie | 8.45 | eV | NIST Webbook |
| ie | 8.59 | eV | NIST Webbook |
| ie | 8.34 | eV | NIST Webbook |
| log10ws | -1.93 | | Crippen Method |
| logp | 0.897 | | Crippen Method |
| mcvol | 115.360 | ml/mol | McGowan Method |
| pc | 3257.86 | kPa | Joback Method |
| rinpol | 803.00 | | NIST Webbook |
| rinpol | 803.00 | | NIST Webbook |
| tb | 398.20 | K | NIST Webbook |
| tc | 618.59 | K | Joback Method |
| tf | 232.70 | K | Joback Method |
| vc | 0.429 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 242.94 | J/mol×K | 436.14 | Joback Method |

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|---|---|---|---|---|
| cpg | 255.73 | J/mol×K | 466.55 | Joback Method |
| cpg | 267.97 | J/mol×K | 496.96 | Joback Method |
| cpg | 279.68 | J/mol×K | 527.37 | Joback Method |
| cpg | 290.88 | J/mol×K | 557.78 | Joback Method |
| cpg | 301.57 | J/mol×K | 588.19 | Joback Method |
| cpg | 311.77 | J/mol×K | 618.59 | Joback Method |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 1.56440e+01 |
| Coeff. B | -3.81889e+03 |
| Coeff. C | -5.18360e+01 |
| Temperature range (K), min. | 300.52 |
| Temperature range (K), max. | 421.44 |

# Sources

**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

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C3711340&Units=SI

**The Yaws Handbook of Vapor Pressure:** https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

# 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

**ie:** Ionization energy

| | |
|---|---|
| **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 |