# Beta,beta'-dithiodipropionic acid dihydrazide

**Other names:** 3,3'-dithiobis(propionohydrazide)
**Inchi:** InChI=1S/C6H14N4O2S2/c7-9-5(11)1-3-13-14-4-2-6(12)10-8/h1-4,7-8H2,(H,9,11)(H,10,1
**InchiKey:** GYQOUZKNOIHPOP-UHFFFAOYSA-N
**Formula:** C6H14N4O2S2
**SMILES:** NNC(=O)CCSSCCC(=O)NN
**Mol. weight [g/mol]:** 238.33
**CAS:** 50906-77-9

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 119.72 | kJ/mol | Joback Method |
| hf | -134.07 | kJ/mol | Joback Method |
| hfus | 43.35 | kJ/mol | Joback Method |
| hvap | 90.23 | kJ/mol | Joback Method |
| log10ws | -1.87 | | Crippen Method |
| logp | -0.872 | | Crippen Method |
| mcvol | 171.160 | ml/mol | McGowan Method |
| pc | 4480.21 | kPa | Joback Method |
| tb | 827.38 | K | Joback Method |
| tc | 1064.83 | K | Joback Method |
| tf | 597.88 | K | Joback Method |
| vc | 0.620 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 474.05 | J/mol×K | 827.38 | Joback Method |
| cpg | 482.85 | J/mol×K | 866.96 | Joback Method |
| cpg | 490.74 | J/mol×K | 906.53 | Joback Method |
| cpg | 497.73 | J/mol×K | 946.11 | Joback Method |
| cpg | 503.82 | J/mol×K | 985.68 | Joback Method |
| cpg | 509.04 | J/mol×K | 1025.26 | Joback Method |
| cpg | 513.40 | J/mol×K | 1064.83 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C50906779&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 |
| **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 |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |