# DL-Cystine

**Other names:** Cystine, DL-
**Inchi:** InChI=1S/C6H12N2O4S2/c7-3(5(9)10)1-13-14-2-4(8)6(11)12/h3-4H,1-2,7-8H2,(H,9,10)(H
**InchiKey:** LEVWYRKDKASIDU-UHFFFAOYSA-N
**Formula:** C6H12N2O4S2
**SMILES:** NC(CSSCC(N)C(=O)O)C(=O)O
**Mol. weight [g/mol]:** 240.30
**CAS:** 923-32-0

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -337.58 | kJ/mol | Joback Method |
| hf | -556.03 | kJ/mol | Joback Method |
| hfus | 34.28 | kJ/mol | Joback Method |
| hvap | 109.94 | kJ/mol | Joback Method |
| log10ws | -0.38 | | Crippen Method |
| logp | -0.808 | | Crippen Method |
| mcvol | 162.940 | ml/mol | McGowan Method |
| pc | 5739.21 | kPa | Joback Method |
| tb | 910.52 | K | Joback Method |
| tc | 1133.18 | K | Joback Method |
| tf | 584.20 | K | Joback Method |
| vc | 0.576 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 458.08 | J/mol×K | 910.52 | Joback Method |
| cpg | 463.72 | J/mol×K | 947.63 | Joback Method |
| cpg | 468.63 | J/mol×K | 984.74 | Joback Method |
| cpg | 472.85 | J/mol×K | 1021.85 | Joback Method |
| cpg | 476.36 | J/mol×K | 1058.96 | Joback Method |
| cpg | 479.17 | J/mol×K | 1096.07 | Joback Method |
| cpg | 481.31 | J/mol×K | 1133.18 | Joback Method |

# 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=C923320&Units=SI |

# 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 |