# 2-((2-[(2-Hydroxyethyl)amino]ethyl)amino)ethanol

**Other names:** 2,2'-(ethane-1,2-diyldiimino)bisethanol
N,N-bis(2-hydroxyethyl)ethylenediamine
**Inchi:** InChI=1S/C6H16N2O2/c9-5-3-7-1-2-8-4-6-10/h7-10H,1-6H2
**InchiKey:** GFIWSSUBVYLTRF-UHFFFAOYSA-N
**Formula:** C6H16N2O2
**SMILES:** OCCNCCNCCO
**Mol. weight [g/mol]:** 148.20
**CAS:** 4439-20-7

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -95.22 | kJ/mol | Joback Method |
| hf | -364.69 | kJ/mol | Joback Method |
| hfus | 29.67 | kJ/mol | Joback Method |
| hvap | 106.40 ± 6.40 | kJ/mol | NIST Webbook |
| log10ws | 0.76 | | Crippen Method |
| logp | -1.850 | | Crippen Method |
| mcvol | 127.100 | ml/mol | McGowan Method |
| pc | 3985.56 | kPa | Joback Method |
| tb | 621.38 | K | Joback Method |
| tc | 785.97 | K | Joback Method |
| tf | 384.34 | K | Joback Method |
| tt | 373.20 ± 0.50 | K | NIST Webbook |
| tt | 373.20 ± 1.00 | K | NIST Webbook |
| vc | 0.479 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 363.21 | J/mol×K | 676.24 | Joback Method |
| cpg | 371.51 | J/mol×K | 703.67 | Joback Method |
| cpg | 379.43 | J/mol×K | 731.10 | Joback Method |
| cpg | 387.00 | J/mol×K | 758.53 | Joback Method |
| cpg | 345.44 | J/mol×K | 621.38 | Joback Method |

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|---|---|---|---|---|
| cpg | 354.52 | J/mol×K | 648.81 | Joback Method |
| cpg | 394.22 | J/mol×K | 785.97 | Joback Method |
| hfust | 49.70 | kJ/mol | 373.20 | NIST Webbook |
| hsubt | 142.70 | kJ/mol | 373.00 | NIST Webbook |
| hvapt | 91.20 ± 0.20 | kJ/mol | 449.50 | NIST Webbook |
| hvapt | 87.70 ± 0.20 | kJ/mol | 449.50 | NIST Webbook |
| hvapt | 84.80 ± 0.20 | kJ/mol | 449.50 | NIST Webbook |

# 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=C4439207&Units=SI

# 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
**hfust:** Enthalpy of fusion at a given temperature
**hsubt:** Enthalpy of sublimation at a given temperature
**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
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**tt:** Triple Point Temperature
**vc:** Critical Volume