# ethyl 4-hydroxybutanoate

**Other names:** ethyl 4-hydroxybutyrate
**Inchi:** InChI=1S/C6H12O3/c1-2-9-6(8)4-3-5-7/h7H,2-5H2,1H3
**InchiKey:** AYPJVXQBVHCUCJ-UHFFFAOYSA-N
**Formula:** C6H12O3
**SMILES:** CCOC(=O)CCCO
**Mol. weight [g/mol]:** 132.16

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -371.10 | kJ/mol | Joback Method |
| hf | -564.20 | kJ/mol | Joback Method |
| hfus | 18.17 | kJ/mol | Joback Method |
| hvap | 54.78 | kJ/mol | Joback Method |
| log10ws | -0.46 | | Crippen Method |
| logp | 0.322 | | Crippen Method |
| mcvol | 108.710 | ml/mol | McGowan Method |
| pc | 3646.53 | kPa | Joback Method |
| rinpol | 1022.00 | | NIST Webbook |
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| rinpol | 1022.00 | | NIST Webbook |
| rinpol | 1022.00 | | NIST Webbook |
| rinpol | 1039.00 | | NIST Webbook |
| ripol | 1819.00 | | NIST Webbook |
| ripol | 1819.00 | | NIST Webbook |
| ripol | 1794.00 | | NIST Webbook |
| ripol | 1819.00 | | NIST Webbook |
| ripol | 1819.00 | | NIST Webbook |
| ripol | 1790.00 | | NIST Webbook |
| ripol | 1822.00 | | NIST Webbook |
| ripol | 1794.00 | | NIST Webbook |
| ripol | 1796.00 | | NIST Webbook |
| ripol | 1795.00 | | NIST Webbook |
| ripol | 1790.00 | | NIST Webbook |
| ripol | 1819.00 | | NIST Webbook |
| tb | 505.15 | K | Joback Method |
| tc | 676.09 | K | Joback Method |
| tf | 290.36 | K | Joback Method |

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|---|---|---|---|
| vc | 0.414 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 245.47 | J/mol×K | 505.15 | Joback Method |
| cpg | 254.32 | J/mol×K | 533.64 | Joback Method |
| cpg | 262.85 | J/mol×K | 562.13 | Joback Method |
| cpg | 271.06 | J/mol×K | 590.62 | Joback Method |
| cpg | 278.97 | J/mol×K | 619.11 | Joback Method |
| cpg | 286.56 | J/mol×K | 647.60 | Joback Method |
| cpg | 293.84 | J/mol×K | 676.09 | Joback Method |
| dvisc | 0.0120283 | Pa×s | 290.36 | Joback Method |
| dvisc | 0.0039241 | Pa×s | 326.16 | Joback Method |
| dvisc | 0.0015977 | Pa×s | 361.96 | Joback Method |
| dvisc | 0.0007647 | Pa×s | 397.75 | Joback Method |
| dvisc | 0.0004134 | Pa×s | 433.55 | Joback Method |
| dvisc | 0.0002454 | Pa×s | 469.35 | Joback Method |
| dvisc | 0.0001569 | Pa×s | 505.15 | 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=R182108&Units=SI

# Legend

**cpg:** Ideal gas heat capacity
**dvisc:** Dynamic viscosity
**gf:** Standard Gibbs free energy of formation
**hf:** Enthalpy of formation at standard conditions
**hfus:** Enthalpy of fusion at standard conditions

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|---|---|
| **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 |
| **rinpol:** | Non-polar retention indices |
| **ripol:** | Polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |