# 2-Ethyl-2-hydroxybutyric acid

**Other names:** Butanoic acid, 2-ethyl-2-hydroxy-
**Inchi:** InChI=1S/C6H12O3/c1-3-6(9,4-2)5(7)8/h9H,3-4H2,1-2H3,(H,7,8)
**InchiKey:** LXVSANCQXSSLPA-UHFFFAOYSA-N
**Formula:** C6H12O3
**SMILES:** CCC(O)(CC)C(=O)O
**Mol. weight [g/mol]:** 132.16
**CAS:** 3639-21-2

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -400.08 | kJ/mol | Joback Method |
| hf | -592.96 | kJ/mol | Joback Method |
| hfus | 13.66 | kJ/mol | Joback Method |
| hvap | 67.76 | kJ/mol | Joback Method |
| log10ws | -0.81 | | Crippen Method |
| logp | 0.622 | | Crippen Method |
| mcvol | 108.710 | ml/mol | McGowan Method |
| pc | 4283.05 | kPa | Joback Method |
| tb | 571.68 | K | Joback Method |
| tc | 745.53 | K | Joback Method |
| tf | 331.37 | K | Joback Method |
| vc | 0.405 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 271.59 | J/mol×K | 571.68 | Joback Method |
| cpg | 279.74 | J/mol×K | 600.66 | Joback Method |
| cpg | 287.45 | J/mol×K | 629.63 | Joback Method |
| cpg | 294.75 | J/mol×K | 658.61 | Joback Method |
| cpg | 301.65 | J/mol×K | 687.58 | Joback Method |
| cpg | 308.18 | J/mol×K | 716.56 | Joback Method |
| cpg | 314.36 | J/mol×K | 745.53 | Joback Method |
| dvisc | 0.0218901 | Pa×s | 331.37 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0045887 | Pa×s | 371.42 | Joback Method |
| dvisc | 0.0013039 | Pa×s | 411.47 | Joback Method |
| dvisc | 0.0004632 | Pa×s | 451.52 | Joback Method |
| dvisc | 0.0001947 | Pa×s | 491.58 | Joback Method |
| dvisc | 0.0000933 | Pa×s | 531.63 | Joback Method |
| dvisc | 0.0000496 | Pa×s | 571.68 | Joback Method |

# Sources

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|---|---|
| **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=C3639212&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# Legend

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