# 2-Propenoic acid, 4-hydroxybutyl ester

**Other names:** 2-Propenoic acid, 4-hydroxybutyl ester
1,4-Butanediol monoacrylate
Butanediol monoacrylate
**Inchi:** InChI=1S/C7H12O3/c1-2-7(9)10-6-4-3-5-8/h2,8H,1,3-6H2
**InchiKey:** NDWUBGAGUCISDV-UHFFFAOYSA-N
**Formula:** C7H12O3
**SMILES:** C=CC(=O)OCCCCO
**Mol. weight [g/mol]:** 144.17

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.7353 | | Cheméo Relay (1.0) |
| hf | -540.24 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 19.48 | kJ/mol | Joback Method |
| hvap | 70.22 | kJ/mol | Cheméo Relay (1.0) |
| ie | 10.02 | eV | Cheméo Relay (1.0) |
| log10ws | -0.28 | | Cheméo Relay (1.0) |
| logp | 0.488 | | Crippen Method |
| mcvol | 118.500 | ml/mol | McGowan Method |
| pc | 3419.86 | kPa | Joback Method |
| rinpol | 1182.00 | | NIST Webbook |
| rinpol | 1182.00 | | NIST Webbook |
| rinpol | 1182.00 | | NIST Webbook |
| tb | 490.05 | K | Cheméo Relay (1.0) |
| tc | 692.14 | K | Cheméo Relay (1.0) |
| tf | 263.42 | K | Cheméo Relay (1.0) |
| vc | 0.429 | m3/kmol | Cheméo Relay (1.0) |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 269.97 | J/mol×K | 524.71 | Joback Method |
| cpg | 319.82 | J/mol×K | 697.39 | Joback Method |
| cpg | 312.39 | J/mol×K | 668.61 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 304.62 | J/mol×K | 639.83 | Joback Method |
| cpg | 296.50 | J/mol×K | 611.05 | Joback Method |
| cpg | 288.02 | J/mol×K | 582.27 | Joback Method |
| cpg | 279.18 | J/mol×K | 553.49 | Joback Method |
| dvisc | 0.0006469 | Pa×s | 412.29 | Joback Method |
| dvisc | 0.0001366 | Pa×s | 524.71 | Joback Method |
| dvisc | 0.0002118 | Pa×s | 487.24 | Joback Method |
| dvisc | 0.0003534 | Pa×s | 449.76 | Joback Method |
| dvisc | 0.0098287 | Pa×s | 299.87 | Joback Method |
| dvisc | 0.0013365 | Pa×s | 374.82 | Joback Method |
| dvisc | 0.0032441 | Pa×s | 337.34 | Joback Method |

# Sources

| | |
|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Cheméo Relay (1.0):** | |
| **Cheméo Relay (1.0, beta):** | |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C2478106&Units=SI |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |

# Legend

| | |
|---|---|
| **af:** | Acentric Factor |
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **ie:** | Ionization energy |
| **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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |

**tf:** Normal melting (fusion) point

**vc:** Critical Volume